

# **ENVIRONMENTAL CHECKLIST AND ANALYSIS**

**SUBSTITUTE ENVIRONMENTAL DOCUMENT  
For the  
Organochlorine Compounds Total Maximum  
Daily Loads  
San Diego Creek, Upper Newport Bay and  
Lower Newport Bay**

**Orange County, California**

**California Regional Water Quality Control Board  
Santa Ana Region**

**July 25, 2007**

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## **1 California Environmental Quality Act Requirements**

The California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board, or Regional Board) is required to comply with the California Environmental Quality Act (CEQA)<sup>1</sup> when considering an amendment to the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan)<sup>2</sup>. The proposed amendment addressed in the following analysis would incorporate total maximum daily loads (TMDLs) for certain organochlorine compounds for San Diego Creek, Upper Newport Bay and Lower Newport Bay, Orange County, California. The Santa Ana Water Board is the Lead Agency responsible for evaluating the potential environmental impacts of the amendment and, in particular, the potential effects of the reasonably foreseeable methods of compliance with the proposed TMDLs.

The State Resources Agency has certified the Water Quality Control (Basin) Planning Program of the State and Regional Water Boards as exempt from the requirement to prepare an Environmental Impact Report (EIR), Negative Declaration (ND) or Initial Study<sup>3</sup>. In lieu of preparing these documents, the Santa Ana Water Board must comply with the State Water Resource Control Board's regulations on exempt regulatory programs when amending basin plans<sup>4</sup>. These regulations require the completion of an Environmental Checklist and a written report that includes: (1) a brief description of the proposed activity; (2) reasonable alternatives to the proposed activity; and (3) mitigation measures to minimize any significant adverse environmental impacts of the proposed activity. The Environmental Checklist for the proposed Basin Plan amendment is presented in Section 5 of this report. Two written reports have been prepared that describe the proposed amendment and its technical basis and that identify reasonable alternatives and mitigation measures: this Substitute Environmental Document dated July 25, 2007 and the November 17, 2006 TMDL technical staff report ("Total Maximum Daily Loads for Organochlorine Compounds - San Diego Creek: Total DDT and Toxaphene; Upper and Lower Newport Bay: Total DDT, Chlordane, Total PCBs, Orange County, California").

Further, CEQA establishes specific requirements for environmental and economic analysis of the proposed adoption of regulatory provisions in basin plans that require the installation of pollution control equipment, establish a performance standard<sup>5</sup>, or establish a treatment requirement<sup>6</sup>. The proposed

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<sup>1</sup> Public Resources Code Sec. 21000 *et seq*

<sup>2</sup> Public Resources Code Sec. 21080

<sup>3</sup> California Code of Regulations, Title 14, Sec. 15251(g)

<sup>4</sup> California Code of Regulations, Title 23, Sec. 3775-3782

<sup>5</sup> The term "performance standard" is not defined in CEQA but in the rulemaking provisions of the Administrative Procedures Act (Government Code Sec. 11340-11359). A "performance standard" is a regulation that describes an objective with the criteria stated for achieving the objective (Government Code Sec. 11342(d))

<sup>6</sup> Public Resources Code Sec. 21159; California Code of Regulations, Title 14, Sec. 15187

TMDLs addressed here include numeric targets that interpret narrative water quality objectives established in the Basin Plan. They also include wasteload and load allocations to achieve these targets. The numeric targets together with the allocations may be considered a performance standard. Compliance with the targets and allocations may require the installation or enhancement of pollution control measures. Accordingly, pursuant to these CEQA requirements, the Santa Ana Water Board must conduct an environmental analysis of the reasonably foreseeable methods of compliance with the proposed TMDLs. This analysis must include at least the following:

- (1) An analysis of reasonably foreseeable environmental impacts of the methods of compliance;
- (2) An analysis of reasonably foreseeable mitigation measures relating to those impacts; and
- (3) An analysis of reasonably foreseeable alternative means of compliance that would avoid or eliminate the identified impacts.<sup>7</sup>

This analysis must take into account a reasonable range of environmental, economic and technical factors, population and geographic areas, and specific sites. Where specific data are not available, the Santa Ana Water Board may utilize numerical ranges and averages but is neither required nor encouraged to engage in speculation or conjecture.<sup>8</sup>

This Substitute Environmental Document, together with the November 17, 2006 technical report, provides the requisite analysis of reasonably foreseeable methods of compliance, alternatives and mitigation measures.

## 1.1 Scope of Environmental Analysis

The Santa Ana Water Board is prohibited from specifying the manner of compliance with its regulations.<sup>9</sup> Dischargers subject to the proposed TMDLs and wasteload/load allocations are responsible to identify compliance strategies, and to conduct requisite CEQA analysis of implementation of the selected strategies at the project level.<sup>10</sup> The Santa Ana Water Board cannot, as a practical matter, conduct project level CEQA analyses, nor is it required to do so<sup>11</sup>.

Consistent with the requirements described above, the following analysis identifies a reasonable range of reasonably foreseeable compliance strategies (Section x) and evaluates reasonably foreseeable environmental effects (Section y, mitigation measures (Section z) and alternative means of compliance (Section v). This analysis takes into consideration a reasonable range of environmental

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<sup>7</sup> California Code of Regulations, Title 14, Sec. 15187(c)

<sup>8</sup> *Id.* Sec. 15187(d)

<sup>9</sup> Water Code section 13360

<sup>10</sup> Public Resources Code section 21159.2

<sup>11</sup> Public Resources Code section 21159(d)

and economic factors, population and geographic areas and specific sites, as required. The Santa Ana Water Board intends this analysis to serve as a first tier environmental document<sup>12</sup>.

## 2 Description of the Proposed Activity

The proposed Basin Plan amendment would incorporate into the Santa Ana Basin Plan TMDLs for the organochlorine compounds total DDT, total PCBs, chlordane, and toxaphene for the Newport Bay/San Diego Creek watershed. Specifically, TMDLs are proposed for DDT and toxaphene in San Diego Creek, and for DDT, chlordane, and PCBs in Upper Newport Bay and Lower Newport Bay. In addition, informational TMDLs for PCBs and chlordane are proposed for San Diego Creek. The purpose of the proposed TMDLs is to achieve and maintain compliance with relevant water quality objectives, including narrative objectives for toxic substances specified in the Basin Plan, and to protect the beneficial uses of these waters. The technical basis for and derivation of the proposed TMDLs and their individual components, including the numeric targets, wasteload allocations and load allocations, are described in detail in the November 17, 2006 TMDL technical report.

The proposed TMDLs include wasteload allocations for the following sources: urban, construction, highways (Caltrans) and commercial nurseries. Load allocations are identified for agriculture (other than the commercial nurseries regulated under existing waste discharge requirements), open space, streams and channels, and undefined sources. It is expected that these allocations will be implemented principally through new or revised waste discharge requirements (including NPDES permits) and/or conditional waivers of waste discharge requirements. Appropriate monitoring requirements will be established to assess compliance with the allocations and TMDLs and to identify needs for enhancement of control measures (e.g., Best Management Practices (BMPs)).

A plan to implement the TMDLs is also proposed as part of the amendment. As required<sup>13</sup>, the proposed implementation plan describes: the actions necessary to achieve the TMDLs, including wasteload and load allocations; identifies schedules for these actions, including a final compliance date; and specifies the monitoring that must be conducted to assess compliance. As described in the November 17, 2006 TMDL technical report (Section 8) and in the proposed amendment (Attachment to Resolution No. R8-2007-0024, Section 4.b.3), a phased, adaptive management implementation approach is recommended. This approach provides for additional investigation and monitoring needed to address

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<sup>12</sup> A "first tier" environmental document provides the coverage of broad environmental issues for incorporation into later, project-specific environmental documents. (California Code of Regulations, Title 14, Secs. 15152, 15385; see also *Koster v. County of San Joaquin* (1996) 47 Cal.App.4th 29, 36-37.)

<sup>13</sup> Water Code Section 13242

technical uncertainties, recognizes that natural attenuation of the organochlorine compounds may affect impairment findings and the need for TMDLs/control actions, and allows responsible parties a reasonable period of time to come into compliance. The tasks to be implemented by these parties focus on the control of erosion and sediment transport since the primary mechanism of organochlorine compound transport in the watershed is via sediment. Monitoring and special investigation requirements are identified to provide data with which to evaluate compliance with the TMDLs and to refine the TMDLs and implementation plan over time. Consistent with the recommendations of stakeholders in the watershed, the proposed implementation plan allows for an integrated Work Plan approach to address the implementation of the proposed organochlorine compounds TMDLs, as well as other established TMDLs (see discussion below), and to investigate other potential sources of impairment in the watershed in a coordinated and comprehensive manner.

### **3 Environmental Setting**

#### **3.1 Surrounding Land Uses and Setting**

The Newport Bay watershed covers an area of 154 square miles (98,500 acres) in central Orange County, California. The San Diego Creek watershed is part of the larger Newport Bay watershed and occupies about 105 square miles. The remainder of the Newport Bay watershed includes the Santa Ana Delhi Channel, Bonita Creek, Big Canyon Wash, and other small freshwater streams. The waterbodies addressed by the proposed TMDLs include: Lower Newport Bay, that portion of the Bay south of the Pacific Coast Highway Bridge; Upper Newport Bay, predominantly a 752-acre estuary; and, San Diego Creek and its tributaries. Flows from the San Diego Creek watershed constitute the major freshwater input to the Bay.

Land use in the watershed has changed dramatically over time, characterized by rapid and ongoing urbanization. Even so, significant open space areas remain. Land use data for 2002 showed that the watershed was comprised of approximately 75% urban, less than 5% agriculture, and about 20% open space, located mainly in the foothills and headland areas. The climate is Mediterranean, characterized by short, mild winters and dry summers. Average rainfall is about 13 inches per year, with 90 percent of the rainfall occurring between November and April. The hydrology of the watershed has been substantially altered over the past 150 years. The most dramatic change occurred with the channelization of San Diego Creek in the early 1960s, which caused the creek to discharge directly into Upper Newport Bay. San Diego Creek, Reaches 1 and 2, contributes about 85% of the freshwater flow volume to the Bay. More information on the watershed characteristics is found in Section 1.1 of the November 17, 2006 TMDL technical report.

### 3.2 Regulatory Setting

The Basin Plan designates the beneficial uses of waterbodies within the Santa Ana Region, establishes water quality objectives for the protection of these uses, and outlines a plan of implementation for maintaining and enhancing water quality. Beneficial uses, water quality objectives and the state's antidegradation policy<sup>14</sup> together comprise federal "water quality standards".

Beneficial uses designated in the Basin Plan for San Diego Creek and Newport Bay that may be affected by the organochlorine compounds addressed by the proposed TMDLs include: Warm Freshwater Habitat (WARM) and Wildlife Habitat (WILD) [San Diego Creek and its tributaries]; Wildlife Habitat (WILD), Rare, threatened, or endangered species (RARE), Spawning, reproduction, and development (SPWN), Marine habitat (MAR), Shellfish harvesting (SHEL) and Commercial and sportfishing (COMM) (Upper and Lower Newport Bay). Upper Newport Bay also supports two additional aquatic beneficial uses: Estuarine habitat (EST) and Preservation of biological habitats of special significance (BIO).

The Basin Plan specifies two narrative objectives for toxic substances:

- (1) *Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health; and*
- (2) *The concentration of toxic substances in the water column, sediment of biota shall not adversely affect beneficial uses.*

Numeric water quality objectives for priority toxic pollutants (including the organochlorine compounds addressed by the proposed TMDLs) for California were established by the USEPA in 2000<sup>15</sup>.

Section 2.2 of the November 17, 2006 TMDL technical report also describes applicable water quality standards.

Organochlorine compounds possess physical and chemical properties that influence their persistence, fate, and transport in the environment. All of these compounds resist degradation, associate with sediments or other solids, and accumulate in the tissue of invertebrates, fish and mammals. Sediment transport is the principal mechanism of organochlorine compound movement in the Newport watershed. Bioaccumulation and food web magnification of these compounds poses the most significant threat to aquatic life and to human consumers of fish and shellfish. At sufficient concentrations in the water column, sediment and/or biota, these substances may also result in direct toxic effects on

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<sup>14</sup> State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California"

<sup>15</sup> California Toxics Rule (CTR) (40 CFR 131.38)

exposed organisms. Evidence of these adverse impacts indicates violation of one or both of the narrative objectives for toxic substances established in the Basin Plan.

Section 303(d)(1)(A) of the CWA requires each State to identify those waters within its boundaries for which effluent limitations are not stringent enough to implement any water quality standard applicable to such waters. Waterbodies identified as impaired in accordance with that requirement are placed on the CWA 303(d) list. The CWA requires that TMDLs be established for these impaired waters.

In accordance with these requirements, San Diego Creek, Reach 1 and Reach 2, Upper Newport Bay and Lower Newport Bay were placed on the CWA 303(d) list due to toxic substances, sediment, nutrients and bacteria (Newport Bay only). The Regional Board has established, and USEPA has approved, TMDLs for sediment, nutrients, bacteria and certain toxic substances (diazinon and chlorpyrifos) for these waters. Implementation of the sediment and nutrient TMDLs relies, to a large extent, on the control of sediment loading to these waters. On June 14, 2002, in response to a consent decree, the US EPA promulgated organochlorine compounds TMDLs for San Diego Creek and Newport Bay. The TMDLs were established in response to an impairment assessment conducted by USEPA that showed fish tissue concentrations in excess of relevant screening values, indicating violations of the narrative toxicity objective established in the Basin Plan. The USEPA TMDLs do not include an implementation plan or compliance schedule; implementation plans are the responsibility of the state. Absent a Regional Board approved implementation plan, the Board must utilize its discretion in establishing permit limits and other requirements that implement USEPA's TMDLs. Since no compliance schedule is included in USEPA's TMDLs, there is no authorization for the Regional Board to provide schedules for compliance with TMDL-related requirements in permits: compliance is to be achieved immediately.

Regional Board staff undertook a review of the USEPA organochlorine compounds TMDLs as part of the consideration of a Basin Plan amendment to incorporate organochlorine compound TMDLs for Newport Bay and its watershed, with an implementation plan, in the Basin Plan. The first step was to conduct an updated impairment assessment, utilizing new data not available to USEPA and relying on the listing criteria and weight of evidence approach identified in the State Board's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (September 2004) ("Listing Policy"). Based on that assessment, and on a subsequent assessment and findings by the State Board in support of approval of the 2006 Section 303(d) list, Board staff developed the proposed TMDLs for DDT, PCBs and chlordane for Upper and Lower Newport Bay, and for DDT and toxaphene for San Diego Creek. Board staff found no impairment due to chlordane or PCBs in San Diego Creek, but proposes informational TMDLs for these substances (informational



TMDLs would not need to be implemented). The 2006 Clean Water Act Section 303(d) list for the Santa Ana Region approved by USEPA confirms that TMDLs for the waterbody/pollutant combinations identified by Board staff are necessary. A more detailed discussion of Board staff's impairment assessment is provided in the November 17, 2006 TMDL Technical Report, Section 2.3. If the Regional Board adopts the proposed organochlorine compounds TMDLs and they are approved by the State Board, Office of Administrative Law (OAL) and the USEPA, then the approved TMDLs would supersede those established by USEPA. If the Regional Board's approved TMDLs do not include all the waterbody/pollutant combinations for which USEPA established TMDLs, then the Board must implement those remaining USEPA TMDLs, unless and until the waterbody/pollutant combinations are removed from the 303(d) list of impaired waters through an USEPA-approved delisting process or USEPA takes other action to withdraw the TMDLs.

Established TMDLs for Newport Bay and its watershed are being implemented to a significant degree by the issuance and enforcement of appropriate waste discharge requirements. The Regional Board and State Board have adopted waste discharge requirements, including National Pollutant Discharge Elimination System (NPDES) permits that regulate discharges within the Newport Bay watershed. These include the general construction stormwater permit issued by the State Board (Order No. 99-08-DWQ, NPDES No. CAS000002, "General Permit for Discharge of Storm Water Runoff Associated with Construction Activity"), the California Department of Transportation (Caltrans) permit issued by the State Board (Order No. 99-06 DWQ, NPDES No. CAS000003), and the MS4 permit issued to Orange County and co-permittees by the Regional Board (Order No. R8-2002-0010, NPDES No. CAS618030). (See also the discussion in the November 17, 2006 TMDL Technical Report, Section 8.3). To implement established TMDLs, these requirements have been or will be revised and/or enforced if and as necessary to implement the TMDLs. Requirements for the implementation, assessment and iterative improvement of Best Management Practices (BMPs) to control sediment discharges have been or will be included in these requirements, where appropriate. In accordance with the established sediment TMDL for Newport Bay and its watershed, sediment control measures are required to be implemented to reduce sediment loading to specified levels. The sediment TMDL allocates the allowable sediment loading capacity among the identified sources. These wasteload and load allocations are implemented through requirements included in waste discharge requirements. The established nutrient TMDL relies on implementation of the sediment TMDL to achieve requisite phosphorus loading reductions (like the organochlorine compounds, phosphorus tends to adsorb to soil particles.) In short, existing waste discharge requirements require or will require the implementation of sediment control measures by responsible parties. As previously noted (Section 2, above), the proposed implementation plan for the organochlorine compounds TMDLs likewise relies to a large extent on the implementation, assessment and iterative improvement of sediment control measures.

It is also important to recognize that there have been and continue to be exceptional efforts by watershed stakeholders on a voluntary basis to address water quality problems affecting Newport Bay and its watershed. In the early 1980's, a comprehensive program was identified to control erosion and sedimentation. The program entails implementation of construction and agricultural BMPs, and construction and maintenance of sediment-trapping basins at key locations in the watershed, in San Diego Creek and in the Upper Bay. The program has been and is being implemented in a coordinated way on a voluntary basis, although the sediment TMDL, established in the late 1990's, includes requirements that reflect and require implementation of the program.

#### **4 Identification of Reasonably Foreseeable Methods of Compliance**

As described in Section 1, above, the Substitute Environmental Document for the proposed organochlorine compounds TMDLs for San Diego Creek, Upper Newport Bay and Lower Newport Bay must include an analysis of the reasonably foreseeable methods of compliance with the TMDLs, taking into account a range of environmental, economic and other factors.

An implementation plan is proposed to achieve the TMDLs (see Attachment to Resolution No. R8-2007-0024, 4.b.3), as required by Water Code Section 13242. This implementation plan relies to a large extent on the iterative implementation of effective BMPs to manage the discharge of sediment, particularly fine sediments, given that the principal pathway of organochlorine compound transport in the watershed is the movement of fine soil particles to which these compounds tend to adsorb. These BMPs include both structural and non-structural controls. The implementation plan identifies specific BMP-related responsibilities for specific types of dischargers (urban, agricultural, etc) but also provides the opportunity to develop and implement an integrated approach to address these and other TMDL requirements. Monitoring and special investigations are also proposed to assess compliance with the TMDLs, including the wasteload and load allocations, the efficacy of BMPs, and to provide data necessary to address uncertainties and provide for future refinement of the TMDLs. Again, an integrated approach to monitoring and special investigations for these and other TMDLs for the watershed can be implemented in lieu of organochlorine compound only TMDL actions by individual or groups of dischargers.

As described in Section 3.2, many of the nonstructural and structural controls identified below are already being implemented, at least to some degree, in response to existing permit and/or established TMDL requirements (e.g., the sediment and nutrient TMDLs for Newport Bay and its watershed). Iterative improvements to these BMPs may be necessary to achieve compliance with the proposed organochlorine compounds TMDLs. Compliance with both the

proposed organochlorine compounds TMDLs and other TMDLs, particularly the established sediment TMDL, is likely to be most problematic during large storm events, since most of the sediment and associated pollutants are mobilized and transported during these events. As a practical matter, large-scale BMPs such as detention basins, natural treatment wetlands and, ultimately, dredging of sediments, may be necessary to assure compliance under these circumstances. The implementation and efficacy of these large-scale measures may be limited by technical, economic and environmental factors. As noted in Section 3.1, the watershed is rapidly urbanizing and the availability and very high cost of land are likely to limit opportunities to implement large-scale detention basins or treatment wetlands. These detention basins/wetlands may or may not be technically sufficient to prevent the movement of the fine particulate sediments that are of particular concern with respect to organochlorine compound transport. Dredging of sediments has been necessary in the watershed and the Bay and considerable costs are involved (see economics analysis in November 17, 2006 TMDL technical report, Section 9.0; see also cost information provided by the County of Orange in January 12, 2007 comments on the proposed TMDLs). Indeed, difficulty in raising the requisite funds has resulted in substantial delays in conducting dredging in Newport Bay needed to satisfy sediment TMDL requirements and to protect navigational and other beneficial uses. However, the watershed stakeholders have been exceptionally skilled in obtaining these funds, though, as noted, it frequently takes considerable time. From a technical and environmental perspective, while dredging of sediments is reasonably feasible, there arise questions of the availability of suitable disposal sites and whether removal of sediments results in exposure and mobilization of previously sequestered contaminants adsorbed to buried sediments. The proposed implementation plan includes a task designed to address these issues.

Pursuant to Section 13360 of the California Water Code, the Regional Board cannot dictate which compliance measures responsible agencies must choose to implement the San Diego Creek and Newport Bay organochlorine compounds TMDLs, or which mitigation measures they would employ. The selection and implementation of one or more large-scale BMPs if necessary to achieve compliance with the proposed TMDLs, will require careful consideration of these technical, economic and environmental factors

With that backdrop, the following identifies reasonably foreseeable methods of compliance with the TMDLs required to be identified by Public Resources Code section 21159:

## **NONSTRUCTURAL CONTROLS**

Non-structural controls are generally aimed at controlling the sources of pollutants and usually do not involve construction of new control measures or treatment facilities. As discussed above, these controls are already being utilized in the watershed and any incremental refinement or implementation needed to

address the proposed TMDLs is expected to have no significant environmental impact (see Section 6). Except for monitoring, implementation of these controls as necessary to implement the proposed organochlorine compounds TMDLs should result in nominal additional expenditures by responsible parties. The County of Orange has estimated that the annual monitoring and special study costs to implement the proposed implementation plan alone would be on the order of \$1 million dollars, in contrast to current expenditure by the MS4 permittees of about \$2.3 million dollars for the stormwater program as a whole. It should be noted that the actual figure for monitoring to fulfill the proposed implementation plan would be substantially less than that estimated by the County since the special studies, a significant component of the overall estimate, are encouraged rather than required by the proposed implementation plan. Nevertheless, the significance of the added expenditure is recognized and addressed through provisions in the proposed implementation plan that allow for a phased and integrated TMDL implementation approach. This approach would not necessarily avoid these costs, but implementation of the integrated approach could be used to prioritize or re-direct expenditures over time and to assure overall efficiency in the use of public resources.

In summary, we have no information that the costs of implementing these measures to improve water quality are not financially feasible. Therefore, these are considered reasonably feasible methods of compliance.

1. **Waste Management Facilities:** Develop, implement and inform the public about a collection program for all banned organochlorine pesticides and PCBs. The County of Orange already executes a hazardous waste management and collection program throughout Orange County, which is implemented through their stormwater program. This existing program should be evaluated and enhanced as necessary. This type of program has had demonstrated success in other geographic areas in collecting banned pesticides.
2. **Education and Outreach:** Review and refine the educational/outreach programs that have already been instituted by the construction industry, Caltrans, agriculture and MS4 permittees/stormwater management agencies in response to existing permit and/or TMDL requirements. Education and outreach facilitates the understanding and implementation of appropriate erosion/sediment control practices to prevent offsite migration of sediment and associated pollutants.
3. **Street Maintenance:** Street sweeping is an effective practice to reduce the transfer of sediment from construction sites to streets and gutters. Street sweeping reduces non-point source pollution by five to 30 percent when a conventional mechanical broom and vacuum-assisted wet sweeper is used. The new vacuum assisted dry sweepers are reported to achieve 50-88 percent overall reductions in the annual sediment loading for a residential

street, depending on sweeping frequency. Again, the reduction in sediment load may result in decreased loading of organochlorine compounds to surfaced waters.

4. **Development/Enforcement of Local Ordinances:** The development and enforcement of municipal ordinances that prohibit or limit excessive watering could reduce discharges of sediment and associated organochlorine compounds to surface waters.
5. **Training:** BMP programs to prevent or reduce erosion and offsite migration of sediment are being implemented by dischargers in response to existing permits and/or TMDL requirements. Focused training on the implementation of these BMPs and/or BMPs enhanced to address fine particulates could improve BMP efficacy and reduce the transport to surface waters of sediment and associated pollutants.
6. **Water Conservation:** Practices and programs that limit the amount of sheet water runoff through irrigation controls could effectively reduce the amount of sediment and associated pollutants to surface waters. Such programs could include “intelligent” irrigation systems operated according to climatic needs.
7. **Monitoring:** Monitoring will not result directly in a reduction of sediment and associated pollutant loading to surface waters but must be used to evaluate the effectiveness of non-structural and structural control measures so that the need for improvements can be identified. Regional and site-specific monitoring is being conducted in Newport Bay and its watershed in response to existing permits and/or TMDLs. These programs can be integrated with organochlorine compound monitoring requirements, particularly if the stakeholders elect to pursue an integrated TMDL implementation approach.

## STRUCTURAL CONTROLS

1. **Natural Treatment Systems:** The construction and use of natural or artificially created wetland systems would likely retard and/or retain sediments, including the fine particulates to which the organochlorine pollutants adhere. A number of regional treatment systems are either being planned or are already in place in the San Diego Creek watershed.
2. **Vegetated Swales/Buffer Strips:** Construct and maintain vegetative buffers and swales along roadsides and in medians. The replacement of open soil or concreted curb or slope areas with vegetated cover would slow down the runoff velocity, increase stormwater infiltration and could reduce the loading of potentially contaminated fine sediments to surface waters.

3. **Silt Fences/Straw Bales:** These are controls placed in construction areas to control sediment. They are generally temporary measures designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences are comprised of permeable fabric that allows sediment in runoff to settle, which should also help control particulates before water leaves the construction site. Straw bales require lengthy installation. Both types of BMPs are primarily placed along and down slope of exposed, highly erodible areas.
4. **Stormdrain Filters/Inlet Protection:** The discharge of sediment into drainages can be reduced by covering or protecting inlets to stormdrains, and/or using filters within stormdrains. The inlet protectors allow sediment-laden runoff from construction or other types of activities to be detained and/or filtered to filter to allow sediment to settle and be removed prior to discharge into storm drainage systems or watercourses.
5. **Detention Basins/Retention Ponds:** Stormwater flows can be effectively retained through these systems. They also reduce the overall levels of sediment-laden runoff flowing into adjacent waterbodies. They must be appropriately constructed and maintained in order to account for the hydraulic design conditions.
6. **Soil Stabilization:** Various soil stabilization measures, including mulches, binders, and hydroseeding can be effective erosion control measures. They can increase cover, stabilize disturbed soil areas, or protect soils from erosion by wind or water, but are temporary in nature, and more or less reliable to retain the original soil cover depending upon how they are applied and maintained.
7. **Diversion Systems:** Construct diversion systems to capture sediment and non-stormwater runoff. During low flow conditions, runoff may be diverted from storm drain outlets to an on-site detention or treatment system and released back to the creek, or it may be diverted to wastewater collection plants for treatment.
8. **Infiltration Systems:** Install and maintain pavement systems that allow storm water to infiltrate into the ground rather than flow into surface waters, potentially carrying sediment and associated pollutants.
9. **Dredging:** Under extreme storm conditions, BMPs may not be effective in reducing erosion and the transport of sediments that may contain organochlorine compounds and/or other pollutants. In such cases, it may be necessary to physically remove, or sequester (e.g., by capping), accumulated sediments and associated pollutants.

## 5 Environmental Checklist

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS</b> - Would the project:				
a) Have a substantial adverse effect on a scenic vista?		X		
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?		X		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?		X		
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?		X		
<b>II. AGRICULTURE RESOURCES:</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
<b>III. AIR QUALITY</b> - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	X			

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	X			
d) Expose sensitive receptors to substantial pollutant concentrations?	X			
e) Create objectionable odors affecting a substantial number of people?		X		
<b>IV. BIOLOGICAL RESOURCES</b> - Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation		X		



ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Plan, or other approved local, regional, or state habitat conservation plan?				
<b>V. CULTURAL RESOURCES</b> - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		
<b>VI. GEOLOGY AND SOILS</b> - Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
<b>VII. HAZARDS AND HAZARDOUS MATERIALS -</b> Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?		X		
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?		X		
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		X		
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VIII. HYDROLOGY AND WATER QUALITY -</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site?		X		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?		X		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?		X		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?		X		
j) Inundation by seiche, tsunami, or mudflow?		X		

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IX. LAND USE AND PLANNING</b> - Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	
<b>X. MINERAL RESOURCES</b> - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?		X		
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?		X		
<b>XI. NOISE</b> - Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	X			
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise	X			

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
levels?				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	X			
<b>XII. POPULATION AND HOUSING</b> - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
<b>XIII. PUBLIC SERVICES</b>				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection? Police protection? Schools? Parks? Other public facilities?				X
<b>XIV. RECREATION</b> - Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect				X

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
on the environment?				
<b>XV. TRANSPORTATION/TRAFFIC</b> - Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	X			
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	X			
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X		
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
<b>XVI. UTILITIES AND SERVICE SYSTEMS</b> – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause	X			

ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
significant environmental effects?				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	X			
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
<b>XVII. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
b) Does the project have impacts that are individually limited, but cumulatively considerable? ('Cumulatively considerable' means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

## **6 Discussion of Possible Environmental Impacts of Reasonably Foreseeable Compliance Methods and Mitigation**

Section 4 of this SED identified the reasonably foreseeable methods of compliance with the organochlorine compounds TMDLs. The Environmental Checklist, listing the potential adverse environmental impacts associated with these methods and characterizing their significance, is shown in Section 5. This section discusses the Environmental Checklist findings and describes potential mitigation measures and the alternate means of compliance that might be available to reduce or eliminate potentially significant impacts.

A significant effect on the environment is defined in the California Code of Regulations as *“a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.”*<sup>16</sup> The statute defines a “significant” effect on the environment as *“a substantial, or potentially substantial, adverse change in the environment”*<sup>17</sup>, where “Environment” is defined by Public Resources Code section 21060.5 as *“the physical conditions which exist within the area which will be affected by a proposed project, including air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance.”*

In formulating answers to the checklist questions, including the mandatory findings of significance, Regional Board staff evaluated the environmental effects of implementing the non-structural and structural compliance methods identified in Section 4 in the context of the existing environmental and regulatory setting (Section 3). As discussed in Section 3, many, if not all, of the types of structural and non-structural controls that are expected to be needed to achieve compliance with the proposed organochlorine compounds TMDLs are already being implemented, at least to some degree, in response to existing permit and/or other TMDL requirements, and/or on a voluntary basis. The significance of environmental effects was also considered in relation to their severity, including duration and areal extent, and probability of occurrence. Social or economic changes related to a physical change in the environment were also considered in determining whether there would be a significant effect on the environment. However, adverse social and economic impacts alone are not considered significant effects on the environment.

Board staff’s review concluded that implementation of the reasonably foreseeable methods of compliance has the potential to result in significant adverse impacts on air quality, noise, transportation/traffic and certain

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<sup>16</sup> 14 CCR section 15382

<sup>17</sup> Public Resources Code section 21068



utilities/services (landfills). While these impacts may be reduced or avoided through the implementation of mitigation measures required by the Regional Board and/or local agencies, it may be infeasible to completely mitigate them because mitigation measures are not technically available, economically infeasible, or are otherwise infeasible. The discussion of appropriate mitigation measures in this SED is limited to those measures that meet the regulatory definition of mitigation (CCR Title 14, Chapter 3, Section 15370)<sup>18</sup>

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

Pursuant to Section 13360 of the California Water Code, the Regional Board cannot dictate which compliance measures responsible agencies must choose to implement the San Diego Creek and Newport Bay organochlorine compounds TMDLs, or which mitigation measures they would employ. Therefore, the exact types, sizes, and locations of BMPs that might be implemented, in addition to those already in place, to comply with the recommended TMDLs are unknown. This analysis considers a range of non-structural and structural BMPs that might be used, but is by no means an exhaustive list of available BMPs. Once the implementing agency (-ies) (responsible agency,-ies) decides upon and selects BMPs, a project-level and site-specific CEQA analysis may be required from the responsible agency.<sup>19</sup> As stated in Section 1, the Regional Board intends this analysis to serve as a Tier One environmental review.

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<sup>18</sup> Section 21083, Public Resources Code; Reference: Sections 21002, 21002.1, 21081, and 21100(c), Public Resources Code.

<sup>19</sup> Title 14, CCR, Chapter 3, 15184(b). If a local agency undertakes a project to implement a rule or regulation imposed by a certified state environmental regulatory program listed in Section 15251, the project shall be exempt from CEQA with regard to the significant effects analyzed in the document prepared by the state agency as a substitute for an EIR. The local agency shall comply with CEQA with regard to any site-specific effect of the project which was not analyzed by the certified state agency as a significant effect on the environment. The local agency need not re-examine the general environmental effects of the state rule or regulation. Authority cited: Section 21083, Public Resources Code; Reference: Sections 21080, 21080.5, and 21154, Public Resources Code.

During dry weather, effective implementation of the BMPs already employed in the watershed is expected to be largely successful in preventing organochlorine loading to surface waters, since it is normally practical to retain small flows on-site. That said however, the efficacy of the existing BMPs in preventing organochlorine compound transport is not known and monitoring is required. Iterative improvement of these BMPs, at least at some locations, may be necessary. This may entail changes in design, size, location or type (e.g., the added use of polyacrylamide to increase soil infiltration and flocculation of suspended sediments).

Because large-scale erosion and sedimentation primarily occurs during high flow storm events, these traditional BMPs may have limited success in reducing/eliminating the discharge of potentially-contaminated sediments to receiving waters during wet weather. As stated in Section 4, as a practical matter, large-scale BMPs such as detention basins, engineered treatment wetlands and, ultimately, dredging of sediments, may be necessary to assure compliance under these circumstances. Also as described in Section 4, it may be infeasible to implement large-scale detention basins or engineered treatment wetlands due to land availability and cost constraints.

The findings identified in the checklist relate to the potential implementation of more advanced BMPs, the construction of sediment detention basins/engineered treatment wetlands, and in-creek or in-bay dredging. It may be noted that the stakeholders in the Newport Bay watershed already have extensive experience and expertise with dredging, detention basin and natural treatment system construction and operation (e.g., periodic dredging of Newport Bay and implementation of sediment detention basins in the watershed and San Diego Creek, as well as natural treatment wetland systems) through the ongoing coordinated implementation, on a voluntary basis, of a comprehensive erosion/sedimentation control plan for the watershed (See Section 3).

## **Environmental Checklist Answers**

### **I. AESTHETICS**

Will the project ...

I. Aesthetics a) Have a substantial adverse effect on a scenic vista?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: Compliance with the OCs TMDLs, wasteload allocations, and load allocations (WLAs/LAs) is expected to be achieved through the effective implementation of a combination of non-structural and structural best

management practices (BMPs) to reduce erosion and the transport of fine sediment and associated pollutants. The proposed TMDL implementation plan relies to a large extent on the iterative implementation of such BMPs to augment pollutant reductions expected to occur through natural attenuation of the organochlorine compounds.

Both structural and non-structural BMPs, including sediment detention basins and engineered treatment wetlands, are already being implemented in the watershed in response to existing Regional Board/State Board permit and/or other TMDL requirements, and/or on a voluntary basis. While improvements may be necessary to address fine particulates, these BMPs are expected to be highly effective during dry weather and most rain events. However, most transport of sediment, including the finer particles to which the OCs tend to adsorb, generally occurs during extreme weather conditions such as catastrophic storm events. During such events, small-scale structural and nonstructural BMPs would likely be ineffective, requiring reliance upon larger-scale detention basins or engineered treatment systems, where feasible. As already noted, the lack of available land in the watershed and its very high cost will likely limit opportunities for installation of such systems, except at a relatively small scale. Dredging of transported sediment may prove necessary to prevent adverse water quality and beneficial use impacts. Again, existing TMDL and/or permit requirements may necessitate the implementation of larger-scale measures, apart from the requirements of the proposed TMDLs.

The implementation of non-structural BMPs is not expected to result in the obstruction of any scenic vista or view open to the public because these BMPs do not involve physical alterations that could affect the scenic environment. Iterative improvements to existing BMPs to address fine particulates (e.g., the addition of chemical coagulants), at least during dry weather, are not expected to be of the type or scale that would physically alter a scenic vista.

Implementation of large-scale detention basins, natural treatment wetlands or dredging activities to address sediment transport/removal as the result of large storms could affect scenic vistas, depending, obviously, on their location. Heavy machinery, stockpile areas and the like would likely be associated with construction of basins or wetlands and with dredging activities, particularly in the Bay, and could cause adverse visual impacts. However, these impacts would be temporary. Once construction/dredging activities are complete, the detention basins/wetlands and dredged areas may in fact result in improvements in the visual character of the surroundings, including scenic views.

Mitigation: In the unlikely event that the dischargers install facilities on a scale that could obstruct scenic views, such impacts could be reduced or eliminated with appropriate planning, design, and siting of the structural BMPs, in coordination with local agency plans and planning programs. Vegetative or other buffers could be used to mitigate any adverse effects of the selected BMPs on

the visual character of the BMP sites and their surroundings. Additionally, many structural BMPs can, if necessary, be constructed underground to eliminate aesthetic issues. Temporary impacts resulting from the use of heavy equipment, stockpile areas and other construction-related activities can be minimized by proper siting, timing to reduce or avoid periods of high public exposure, and the use of vegetative or other buffers. Such mitigation measures can and should be required by local lead and responsible agencies through their project-specific CEQA and/or planning processes.

I. Aesthetics b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: See discussion 1.a., above. Implementation of large-scale BMPs and/or dredging activities has the potential to adversely affect scenic resources, if not properly planned, sited and designed. It is unlikely that compliance with the proposed TMDLs will rely upon the construction of large facilities such as detention basins that could substantially damage scenic resources, other than on a temporary basis during construction/dredging. Over the long-term, implementation of these BMPs may enhance scenic resources. This is particularly true for dredging activities in Newport Bay, where the removal of sediment in specific areas restores and enhances habitats of various kinds, generally contributing to improved aesthetics and opportunities to observe wildlife. Continued usage of existing BMPs managing the discharge of sediment offsite should not damage any scenic resources.

Mitigation: See 1.a., above

I. Aesthetics c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: See I. Aesthetics a) above.

Mitigation: See I. Aesthetics a) above.

I. Aesthetics d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: None of the non-structural BMPs identified in Section 4 would result in substantial physical changes to the environment, including light or glare that would affect aesthetics. The construction and installation of structural BMPs could be performed during evening or night time hours, though this is unlikely for practical reasons. If this were to occur, night time lighting would be required to perform the work. Also, lighting could possibly be used to increase safety around structural BMPs.

Mitigation: In the unlikely event that construction is performed during night time hours, a lighting plan can be implemented that includes shielding on all light fixtures, and directional lighting methods to limit the glow of lights and glare. Vegetative or other types of screening may be used. If and where additional lighting is necessary for safety purposes once construction of BMPs is complete, the lighting plan might entail low intensity lighting and/or rotational timing of lighting fixtures. Such mitigation measures can and should be required by local lead and responsible agencies through their project-specific CEQA and/or planning processes.

## **II. AGRICULTURE RESOURCES**

Will the project ...

II. Agriculture Resources a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Answer: No Impact

Impact Discussion: The implementation of the proposed Basin Plan amendment will not foreseeably result in changes to present land uses, including prime, unique or important farmland. The current structural BMPs used to manage or control runoff from the watershed are placed such that they do not impede the use of land for farming. If new BMPs are required, they can be sited or sized such that farmland is not impacted.

Implementation of the proposed TMDLs would necessitate expenditures to address monitoring and BMP requirements, and these added costs could provide impetus for conversion of agricultural lands to urban or other uses. However, as noted in Section 1.1.1 of the OCs TMDLs Technical Report, as of the year 2002, agriculture accounted for only approximately five percent of land use in the San Diego Creek/Newport Bay watershed. The amount of land in the watershed used for agriculture continues to diminish rapidly in response to urban development pressure. The majority of the areas in agricultural or farm use in the watershed are under lease from private landowners who have, and, in many

cases are implementing, long term urban and residential development plans. These development interests significantly outweigh any potential impetus for land conversion that might be provided by the proposed TMDLs, or those TMDLs already established for the watershed.

Mitigation: No mitigation is necessary.

II. Agriculture Resources b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Answer: No Impact

Impact Discussion: See II. Agriculture Resources a) above.

Mitigation: See II. Agriculture Resources a) above.

II. Agriculture Resources c) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Answer: No impact.

Impact Discussion: See II. Agriculture Resources a) above.

Mitigation: See II. Agriculture Resources a) above.

### **III. AIR QUALITY**

Will the project...

III. Air Quality a) Conflict with or obstruct implementation of the applicable air quality plan?

Answer: Potentially Significant Impact

Impact Discussion: The non-structural BMPs identified in Section 4 include street sweeping, which is already conducted in the watershed in response to existing permit requirements. Substantial increases in this activity, if pursued by the responsible parties in response to the proposed TMDLs, would likely result in increases in vehicle emissions that could have potentially significant, if periodic and temporary, effects on air quality and implementation of the air quality plan for the South Coast Basin.

Air quality impacts that may affect implementation of the air quality plan are likely to result during construction of large-scale structural BMPs and/or dredging. These impacts would result from increased vehicular traffic (including the transport of personnel and equipment to and from the construction/dredging site) and use of heavy equipment associated with construction activities and the removal and disposal of sediment/dredge spoils. These impacts would be temporary but potentially significant, even if equipment/vehicles with emission controls are employed and properly maintained. Once construction is complete, there may be short-term periods of increased equipment/vehicular activity associated with maintenance of installed facilities. In addition, the generation of visible emissions, fugitive dust and particulate matter during construction or maintenance activities could also impact ambient air quality.

Mitigation: Impacts may be reduced but likely not below a level of significance completely avoided through the use of mitigation measures that can and should be required by local lead or responsible agencies through their CEQA and/or planning processes. These include low-emission vehicles/equipment, use of soot reduction traps/diesel particulate filters, use of emulsified diesel fuel, use of vacuum-assisted street sweepers to minimize particulate suspension, design of BMPs to minimize the need for maintenance, and proper vehicle maintenance. Fugitive dust and aerial suspension of particulate matter can be reduced by standard construction methods, such as moisture control measures.

III. Air Quality b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Answer: Potentially Significant Impact

Impact Discussion: See III. Air Quality a). above. The watershed is within the South Coast Basin of the AQMD, which is non-attainment due to particulate matter (10 and 2.5 microns) and ozone. The air quality impacts described in “a”, above would contribute to non-attainment.

Mitigation: See III. Air Quality a). above.

III. Air Quality c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Answer: Potentially Significant Impact

Impact Discussion: See III. Air Quality a) and b) above. The air quality impacts described in “a”, above, would likely result in a cumulatively significant net

increase of air pollutants, given the existing non-attainment status of the watershed area.

Mitigation: See III. Air Quality a) and b) above.

III. Air Quality d) Expose sensitive receptors to substantial pollutant concentrations?

Answer: Potentially Significant Impact

Impact Discussion: See III. Air Quality a) above.

Mitigation: See III. Air Quality a) above.

III. Air Quality e) Create objectionable odors affecting a substantial number of people?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: Noxious odors can result from the exhaust from vehicles and equipment used to construct/maintain structural BMPs, and from street sweepers. Such impacts are of short duration in localized areas but cumulatively may nevertheless affect a large number of people over time. Excavation needed for construction and/or dredging activities may expose soils/sediments with noxious odors (e.g., sulfides). Stagnant water left at construction sites may also result in noxious odors.

Mitigation: Use of low emission vehicles/equipment and proper maintenance of vehicles/equipment should reduce noxious emissions. Objectionable odors from engine exhaust would be temporary, and should dissipate once the vehicle has passed through the area.

Structural BMPs should be properly designed to eliminate or minimize standing or pooled water, and installed in isolated locations to maximize the distance to sensitive receptors should stagnation occur. Mitigation measures to eliminate odors from structural BMPs include: 1) regular inspections to ensure that water does not pool and become stagnant; 2), utilize covers, filters, or barriers to prevent the escape of odors; 3), install and operate aeration devices; and, 4) use odor suppressing chemical additives. During maintenance, odorous sources should be uncovered for as short a time period as possible. It may be feasible to schedule construction/maintenance/dredging activities during periods when there are fewer people in the area.



These mitigation measures can and should be required by local lead or responsible agencies through their CEQA and/or planning processes

#### **IV. BIOLOGICAL RESOURCES**

Will the project...

IV. Biological Resources a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Answer: Potentially Significant

Impact Discussion: None of the non-structural BMPs identified in Section 4 would result in physical changes to the environment that would significantly adversely affect biological resources, including listed or candidate species and their habitats. Non-structural BMPs such as measures to reduce nuisance flows to surface waters, including water conservation measures, are expected to result in changes in hydrology that may affect habitats and the species utilizing them. Such measures are already being implemented in the watershed, in part in response to existing permit requirements (e.g., MS4). Any changes to these non-structural measures implemented by the responsible agencies in response to the proposed TMDLs would not have a substantial incremental environmental effect.

Construction of detention basins and natural treatment wetlands, and dredging activities, if pursued by the stakeholders to comply with the proposed TMDLs, have the potential to adversely affect biological resources, including candidate, sensitive, or special species, riparian and wetland habitats and the movement of fish and wildlife.

Impacts could, and, in the case of large-scale dredging, are likely to include: mortality resulting from construction or other human-related activity; the direct loss or modification of occupied habitat, including nest/den sites; and, impairment of essential behavioral activities, such as breeding, resting and feeding due to habitat loss/modification and/or increased human disturbance, including increased noise or light.

Mitigation: Measures can be implemented (and have already been successfully implemented in this watershed) to mitigate these impacts to levels that are less than significant. Specific projects would be subject to requirements for avoidance and mitigation imposed by the California Department of Fish and Game and, in cases involving federally-listed species, the U.S. Fish and Wildlife Service. These requirements include: pre-construction surveys to determine species and habitat presence and the need for mitigation; incorporation of buffer areas in project

design; project timing restrictions to avoid sensitive species presence and nesting activities; and impact avoidance by use of alternative locations and/or design features. These agencies have also approved mitigation for site-specific project impacts at alternative locations in support of habitat and species conservation plans and goals for the watershed as a whole.

Dredging activities are particularly likely to result in significant adverse impacts on biological resources. Again, specific projects would be reviewed and approved by the Department of Fish and Game, U.S. Fish and Wildlife Service and the Regional Board (for consideration of Clean Water Act Section 401 water quality standards certification (in most cases) and regulation under waste discharge requirements). These agencies would disallow or require modification of projects that would result in significant, unmitigable adverse biological impacts. There is extensive experience in this watershed with CEQA-compliance, permitting and implementation of large-scale dredging projects, both in the Bay and in San Diego Creek. Dredging in the Bay has been carefully coordinated with the Department of Fish and Game and U.S. Fish and Wildlife Service to achieve biological restoration and protection goals for the Upper Newport Bay Ecological Reserve. There is no reason to suppose that such advantageous coordination could not be accomplished elsewhere in the watershed in conjunction with large scale detention basin/wetlands treatment system construction and operations. Over the long-term, sound planning and implementation of dredging and other BMP projects in accordance with requirements imposed by the Department of Fish and Game, the U.S. Fish and Wildlife Service and the Regional Board is expected to support implementation of habitat and species conservation plans, resulting in enhanced protection and restoration of biological resources in the watershed as a whole.

Since the locations of potential BMPs that will be implemented to comply with the TMDLs are currently unknown and cannot be dictated by the Regional Board, these site-specific measures cannot be identified or analyzed in this document.

Also, prior to approving these TMDLs, USEPA must consult with the US Fish and Wildlife Service (USFWS), pursuant to Section 7 of the Endangered Species Act, in order to ensure that the TMDLs will not jeopardize any federally listed species. Regional Board consultation will also occur with the California Department of Fish and Game to ensure that the TMDLs will be in compliance with the California Endangered Species Act (CESA). Consultation with trustee agencies, and implementation of mitigation measures they identify, will ensure that the TMDLs will not cause any significant adverse impacts to biological resources.

When specific projects are designed and their sites are identified, a focused protocol animal survey and/or a search of the California Natural Diversity Database should be performed to confirm that any potentially special-status animal species in the site area are properly identified such that site-specific protection measures can be developed as necessary.

In sensitive habitat areas with unique, rare or endangered species, responsible agencies will be required to consider the implementation of non-structural BMPs, such as developing and enforcing ordinances, and/or low impact structural BMPs that can be retrofitted into existing facilities to minimize biological resource impacts.

IV. Biological Resources b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: See IV. Biological Resources a) above.

Mitigation: See IV. Biological Resources a) above.

IV. Biological Resources c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: Non-structural BMPs, such as the creation and enforcement of ordinances to eliminate nuisance flows, or the use of water conservation practices, are currently practiced in the Newport watershed, at least in part in response to existing permit (e.g., MS4) requirements. The consequent reduction of nuisance flows to surface waters in the watershed could result in changes to wetland hydrology and the diversity or number of any species of plants and animals. The effects of any changes in existing implementation of these non-structural BMPs, if implemented by the responsible parties in response to the proposed TMDLs, are expected to be insignificant.

Dredging and the installation of structural BMPs such as detention basins or engineered wetlands treatment systems could affect existing wetlands at the site by direct removal or filling. The construction and operation of detention basins and wetlands treatment systems could cause changes in hydrology in adjacent surface waters that would affect the establishment of wetlands elsewhere, or the health and maintenance of existing wetlands. However, it is more likely that these structural controls could be designed and implemented so as to provide a net increase in available wetland and/or open water habitat. Typically, engineered wetlands systems are designed for this very purpose.

Mitigation: Potential impacts to wetlands can be mitigated by proper siting, design and implementation so as to avoid or minimize impacts on wetlands. Design measures can be employed to reduce or eliminate changes in hydrology that would affect the establishment and maintenance of wetlands. Where dredging activities would directly impact existing or potential wetlands, mitigation at alternative sites would need to be identified and implemented in concert with the biological resource agencies. See IV. Biological Resources a), above.

IV. Biological Resources d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: See IV. Biological Resources a) and c) above. The implementation of detention basins or engineered wetlands could affect the movement of fish species by changing local stream hydrology and/or by imposing physical barriers. Depending on their size, location and design, these structural measures could also impose physical barriers on the movement of wildlife along wildlife corridors. Changes in stream courses resulting from modified hydrology and/or physical barriers could affect spawning and nursery areas. Dredging activities could result in physical removal or substantial alteration of spawning and nursery sites.

Mitigation: See IV. Biological Resources a) and c) above. Potential impacts to fish and wildlife movement and nursery sites can be mitigated by proper siting, design and implementation. Design measures that would assure maintenance of minimum flows in adjacent surface waters can be employed to reduce or eliminate changes in hydrology that would affect fish movement. To the extent that physical barriers arise with the implementation of these measures, alternative travel corridors/maintenance of minimum low flow channels can be incorporated in project design. Where dredging activities would directly impact existing or potential nursery sites, mitigation at alternative sites would need to be identified and implemented in concert with the biological resource agencies.

IV. Biological Resources e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Answer: No Impact

Impact Discussion: Neither non-structural nor structural BMPs, including the construction, implementation or maintenance of detention basins, natural

treatment systems, and/or dredging, should conflict with local policies or ordinances. If and as conflicts arise as specific projects are proposed, the projects would need to be redesigned to conform to the local policies or ordinances, unless variances, if available, are obtained.

Since the locations of potential BMPs that will be implemented to comply with the TMDLs are currently unknown and cannot be dictated by the Regional Board, the potential for such conflicts to arise is too speculative to consider in detail in this document.

Mitigation: None necessary.

IV. Biological Resources f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Answer: Less Than Significant Impact with Mitigation Incorporation

Impact Discussion: See IV. Biological Resources a) above. Part of the San Diego Creek watershed is within the planning area for the Central/Coastal Natural Community Conservation Plan (NCCP) and Habitat Conservation Plan (HCP), managed by the Nature Reserve of Orange County, a non-profit organization. As described previously, BMP implementation can be planned, designed and coordinated so as to enhance habitat and natural community plans provided that the BMP will not result in negative impacts to habitat and wildlife preservation goals outlined by the plan. BMPs could potentially become key features of these plans, provided that their design and implementation is coordinated with the habitat and wildlife preservation goals, and that their purpose, construction, operation and maintenance does not conflict with other uses in the area. However, since the NCCP/HCP lands are generally located upgradient and outside of developed lands in the watershed, it is unlikely that they would be used to site BMPs that would implement the TMDLs since there are no expected sources of organochlorine compounds in these areas.

Mitigation: See IV. Biological Resources a) above.

## **V. CULTURAL RESOURCES**

Will the project...

V. Cultural Resources a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

V. Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

V. Cultural Resources c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

V. Cultural Resources d) Disturb any human remains, including those interred outside of formal cemeteries?

Answer (a, b, c and d): Less than Significant with Mitigation Incorporation.

Impact Discussion: The implementation of non-structural BMPs would not result in physical changes that would affect the significance of an historical, archaeological or paleontological resource, or a unique geological feature, or result in the disturbance of human remains.

The construction of structural BMPs has the potential to significantly affect these resources through direct destruction or substantial disturbance as the result of earth –moving or other construction-related activities.

Mitigation: Local agencies can and should require site-relocation and/or alternative project design/implementation to mitigate these potential impacts.

## **VI. GEOLOGY AND SOILS**

Will the project...

VI. Geology and Soils a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

VI. Geology and Soils a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving ii) Strong seismic ground shaking?

VI. Geology and Soils a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving iii) Seismic-related ground failure, including liquefaction?

VI. Geology and Soils a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving iv) Landslides?

Answer: No Impact

Impact Discussion: None of the reasonably foreseeable structural and nonstructural BMPs identified in Section 4 would result in physical changes in the environment that could or would occasion the subject impacts. To the extent that project-specific analysis identifies any such impacts, suitable mitigation

measures must be identified and implemented, such as selection of an alternative location or design, or implementation of an alternative BMP(s).

Mitigation: None necessary.

VI. Geology and Soils b) Result in substantial soil erosion or the loss of topsoil?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: Non-structural BMPs would not result in the substantial increase of water erosion of soils or the loss of topsoil because none of the non-structural BMPs would result in increased discharges to the MS4 system, or in substantially exposing soils to erosion by wind and water. Reductions in surface water flows that may result from the implementation of water conservation and nuisance flow reduction measures may expose stream bed sediments to erosion. However, the effects of any changes in existing implementation of these non-structural BMPs, if implemented by the responsible parties in response to the proposed TMDLs, are expected to be insignificant.

Depending on the structural controls or BMPs selected, soil excavation and grading may be necessary during construction of new structures, creating the potential for wind or water erosion of soil/topsoil. Such impacts should be short-term and occur only during construction.

Mitigation: Construction sites are currently required to implement sediment control measures pursuant to existing permit requirements (MS4, general construction permit) and local agency requirements established to implement permit requirements. Pursuant to these requirements, best management practices must be used during implementation to minimize the potential for erosion and offsite sediment runoff. These BMPs may include the diversion of stormwater or reduction of runoff flow velocity from some sites.

VI. Geology and Soils c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: Neither current nor reasonably foreseeable nonstructural BMPs would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project because the controls would not involve new movement of soil or changes to the geologic structure.

It is theoretically possible that detention basins/engineered treatment wetlands could be implemented at a scale and/or located where the infiltration of water retained in the facilities could cause high groundwater table elevations and unstable geologic conditions, potentially resulting in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Mitigation: The potential for these impacts can be reduced or eliminated by proper siting, engineering design and operation or by the selection of alternative BMPs. Structures should not be located in unstable geologic areas or where loose or compressible soils are present. Infiltration type BMPs could be sited away from areas with loose or compressible soils, and away from slopes that could become destabilized by an increase in groundwater flow. If necessary, detention basins could be designed to be located in areas that have clay soils to decrease the infiltration of water. Adverse impacts could also be avoided through proper geotechnical investigations, siting, design, and ground and groundwater level monitoring to ensure that structural BMPs are not employed in areas subject to unstable soil conditions to mitigate potential impacts to a less than significant level.

VI. Geology and Soils d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Answer: Less than Significant Impact with Mitigation Incorporation

Impact Discussion: See the response to VI. Geology and Soils c) above.

Mitigation: See the response to VI. Geology and Soils c) above.

VI. Geology and Soils e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Answer: No Impact

Impact Discussion: Implementation of the proposed TMDLs will not result in physical changes to the environment relevant to the suitability of subsurface or alternative waste water disposal systems. In any case, sewers are available in the watershed.

Mitigation: None necessary.

## **VII. HAZARDS AND HAZARDOUS MATERIALS**



Will the project...

VII. Hazards and Hazardous Materials a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Answer: Less Than Significant Impact with Mitigation Incorporated.

Impact Discussion: The reasonably foreseeable non-structural and structural BMPs included in this evaluation would not, for the most part, require the routine transport, use, or disposal of hazardous materials. A foreseeable exception is the implementation of collection program(s) for remnant organochlorine compound stocks. However, such collection programs are already being implemented successfully in the watershed and any improvements necessary to address the proposed TMDLs should not have a significant incremental environmental effect. Excavation necessary to construct detention basins or engineered wetlands and/or dredging activities may result in the exposure of hazardous soils or other materials and the need to properly remediate and/or dispose of these materials. This situation is not expected to be routine but limited to construction/dredging at specific sites for the duration of the activity.

Mitigation: Potential hazards associated with collection programs can be mitigated with proper handling, storage and disposal procedures already utilized in the watershed. Pre-project site characterization is already and can continue to be used to identify the potential for discovery of hazardous soils/materials as detention basins/engineered wetlands are constructed or dredging is conducted. The results of these characterizations can be used to identify or determine the need for project alternatives, including the selection of alternative sites and project designs that would avoid or minimize the exposure of hazardous materials. Remediation/disposal plans have been and can continue to be identified to minimize public and environmental exposure to these materials.

VII. Hazards and Hazardous Materials b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Answer: Less Than Significant Impact.

Impact Discussion: See VII. Hazards and Hazardous Materials a) above.

Mitigation: See VII. Hazards and Hazardous Materials a) above.

VII. Hazards and Hazardous Materials c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Answer: No Impact

Impact Discussion: See VII. Hazards and Hazardous Materials a) above. The reasonably foreseeable methods of compliance with the proposed TMDLs would not necessitate hazardous emissions or handling of hazardous substances within the proximity of a school.

Mitigation: None necessary.

VII. Hazards and Hazardous Materials d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Answer: No Impact

Impact Discussion: It is not reasonably foreseeable that the implementation of the TMDLs will require use of a site location that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. TMDL implementation may entail implementation of BMPs at former U.S. Marine bases, however, these sites are and have been subject to remediation to address hazardous waste contamination.

Mitigation: None necessary.

VII. Hazards and Hazardous Materials e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Answer: Less Than Significant Impact with Mitigation.

Impact Discussion: See XIV. Transportation/Traffic d), below.

Mitigation: See XIV. Transportation/Traffic d), below.

VII. Hazards and Hazardous Materials f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Answer: Less Than Significant Impact with Mitigation.

Impact Discussion: See XIV. Transportation/Traffic d), below.

Mitigation: See XIV. Transportation/Traffic d), below.

VII. Hazards and Hazardous Materials g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Answer: Less Than Significant Impact with Mitigation.

Impact Discussion: There is a slight possibility that structural BMPs may significantly impact the implementation of an adopted emergency response or evacuation plan. During the construction activities, the equipment could impede emergency evacuation or response plans by obstructing the movement of people or blocking the progress of emergency equipment. To the extent that implementation of any of the reasonably foreseeable BMPs would result in traffic hazards (see XIV. Transportation/Traffic d), below) or extend travel time, the implementation of an emergency response plan could be adversely affected. Since the locations of potential BMPs that will be implemented to comply with the TMDLs are currently unknown and cannot be dictated by the Regional Board, the likelihood or extent of such an impact can only be speculated.

Mitigation: During construction activities, responsible agencies could insure that storage areas are set aside for machinery. Specific parking areas could be created for earth-moving machines and other equipment. Temporary streets should be established to insure the flow of vehicles is not obstructed. Safety programs such as training in emergency evacuation procedures could be taught and practiced during routine work periods. See also XIV. Transportation/Traffic d), below.

VII. Hazards and Hazardous Materials h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Answer: Less than significant.

Impact Discussion: It is not reasonably foreseeable that the implementation of detention basins, engineered wetlands or dredging activities would have a significant effect on the potential for fire loss. The construction of engineered wetlands may result in the growth of vegetation in urban areas, including

residential areas. However, implementation of appropriate vegetation management protocols should prevent a fire hazard.

Mitigation: None necessary.

## **VIII. HYDROLOGY AND WATER QUALITY**

Will the project...

VIII. Hydrology and Water Quality a) Violate any water quality standards or waste discharge requirements?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: The purpose of the implementation of the proposed TMDLs is to improve quality conditions in San Diego Creek and its tributaries, and within Upper and Lower Newport Bay, such that water quality standards are attained. Over the long-term, implementation of the TMDLs is expected to result in improved water quality conditions and the restoration and protection of water quality standards.

During construction and maintenance of structural BMPs, there may be short-term reductions in water quality that result from the wind or water erosion of soils and the transport of these soils, which may contain organochlorine or other pollutants, to surface waters. As discussed in Section 4, dredging activities, particularly large-scale dredging such as has occurred in Newport Bay, are likely to result in temporary re-suspension of sediments, resulting in adverse increases in turbidity, reduction in light transmission, and the potential for mobilization of pollutants, including the organochlorine compounds, adsorbed to the sediments. Dredging operations are conducted in accordance with waste discharge requirements issued by the Regional Board that require the implementation of operational controls, such as silt curtains, that limit the spatial extent of these adverse impacts. Failure to implement the waste discharge requirements can lead to adverse impacts on water quality standards, and, obviously, violations of the requirements. These impacts are of short-duration and limited in scope, provided that the operations are conducted properly and efficiently. As a practical matter, consistent compliance with these waste discharge requirements may be difficult for the large-scale dredging activities in Newport Bay, leading to violations of turbidity standards and waste discharge limits based on those standards. However, compliance can be achieved most of the time through diligent operation of the dredge facilities. Adverse impacts associated with infrequent and temporary violations of the requirements are not expected to result in significant impairment of water quality or beneficial uses.

The use of nonstructural controls such as water conservation or local ordinances may result in the reduction of nuisance flows during dry weather (see impact discussion under IV. Biological Resources c) above). The reduction of nuisance flows could result in the reduction of the volume of overall flow within San Diego Creek and its tributaries during dry weather. The reduction may cause an increase in the temperature of instream flows and a decrease in dissolved oxygen in the pools and riffles, changing the ecological characteristics of affected surface waters, with consequent changes in species composition and abundance. Beneficial uses, including wildlife and aquatic uses, groundwater recharge, and recreation, could be adversely affected. However, these non-structural BMPs are already being implemented in the watershed. Any changes to these non-structural measures implemented by the responsible agencies in response to the proposed TMDLs would not have a substantial incremental environmental effect.

Mitigation: Changes in water quality as the result of construction and maintenance of detention basins/engineered wetlands can be avoided or reduced by implementation of now standard BMPs (e.g., silt fences, installation of small-scale retention basins, construction of swales, use of chemical flocculating agents such as polyacrylamide monomer (PAM) to hold sediment in place designed to prevent erosion and off-site migration of sediment and any associated pollutants to surface waters. Dredging operations conducted in accordance with established waste discharge requirements, which require the implementation of suitable BMPs (e.g., silt curtains), should not result in significant adverse impacts on water quality standards.

VIII. Hydrology and Water Quality b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Answer: Less Than Significant

Impact Discussion: As discussed in VIII. Hydrology and Water Quality a) above, certain non-structural BMPs (water conservation, nuisance flow reduction measures) are intended to decrease surface water flows, which would affect the amount of water available for groundwater recharge. These measures are already being implemented in the watershed. Any changes to these non-structural measures implemented by the responsible agencies in response to the proposed TMDLs would not have a substantial incremental environmental effect.

The implementation of detention basins or engineered wetlands may increase groundwater recharge as the result of the purposeful retention of surface flows,

allowing more time for infiltration of these flows into underlying aquifers. Depending upon the location of these BMPs, there may be a change in recharge locations. However, the net effect is expected to be an increase in recharge in the groundwater management zone as a whole.

Mitigation: None necessary.

VIII. Hydrology and Water Quality c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: Implementation of detention basins/engineered wetlands would result in, or may require, changes to surface water drainage patterns. Detention basins would be constructed purposefully to interrupt surface water flows, and, depending on their location, may require or result in surface water diversion. Similarly, engineered wetlands may require surface water diversion to provide a source of water and are expected to retain water, at least long enough to provide desired treatment. However, none of these hydrological changes should result in substantial erosion or siltation either on or off site, provided that the facilities are properly designed, constructed and operated, and provided that standard erosion control practices are employed as necessary.

Mitigation: Proper siting, design and operation of structural BMPs and use of standard erosion and siltation control practices should avoid or minimize the subject impacts to less than significant levels.

VIII. Hydrology and Water Quality d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: See response to VIII. Hydrology and Water Quality c) above.

Mitigation: See response to VIII. Hydrology and Water Quality c) above.

VIII. Hydrology and Water Quality e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Answer: No impact.

Impact Discussion: Detention basins/engineered wetlands used to comply with the proposed TMDLs are intended to retain water to allow sediment settling and/or pollutant treatment to improve water quality conditions and would not create new sources of water runoff.

Mitigation: None necessary.

VIII. Hydrology and Water Quality f) Otherwise substantially degrade water quality?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: See response to VIII. Hydrology and Water Quality a).

Mitigation: See response to VIII. Hydrology and Water Quality a).

VIII. Hydrology and Water Quality g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Answer: No impact.

Impact Discussion: No reasonably foreseeable effects of the proposed TMDLs on housing in 100-year flood hazard areas are known. Since the locations of potential BMPs that will be implemented to comply with the TMDLs are currently unknown and cannot be dictated by the Regional Board, the likelihood or extent of such an impact could only be speculated.

Mitigation: None necessary.

VIII. Hydrology and Water Quality h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

Answer: No Impact

Impact Discussion: Since the locations of potential BMP implementation to comply with the TMDLs are currently unknown and cannot be dictated by the Regional Board, the likelihood or extent of such an impact could only be speculated.

Mitigation: None necessary.

VIII. Hydrology and Water Quality i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Answer: Less Than Significant With Mitigation Incorporated

Impact Discussion: Depending on its size, location and design (including, potentially, a levee or dam), a large-scale detention basin or engineered wetland with substantial amounts of retained water could create or contribute to flooding potential for adjacent properties under extreme storm conditions, should the design capacity of the facilities be exceeded or a design feature fail.

Mitigation: Proper siting, design and operation of structural BMPs should avoid or reduce these potential impacts to insignificant levels.

VIII. Hydrology and Water Quality j) Inundation by seiche, tsunami, or mudflow?

Answer: Less than Significant Impact with Mitigation Incorporation

Impact Discussion: Depending on its size, depth, location and design (including, potentially, a levee or dam), a large-scale detention basin or engineered wetland with substantial amounts of retained water could create or contribute to inundation of adjacent properties if a seiche were to occur in the facilities during a large earthquake event, and the facilities design features fail (e.g., facility's freeboard design is exceeded by the seiche).

Mitigation: Proper siting, design and operation of structural BMPs that include adequate consideration of potential seismic effects should avoid or reduce these potential impacts to insignificant levels.

## **IX. LAND USE AND PLANNING**

Will the project ...

IX. Land Use and Planning a) Physically divide an established community?

Answer: No Impact

Impact Discussion: It is unforeseeable that implementation of BMPs at a scale large enough to divide an established community could or would take place in the Newport watershed, given the lack of available land, the high cost of remaining



developable land, and likely community opposition on social, economic, and environmental grounds (e.g., construction and operation of such facilities would likely have substantial effects on air quality, traffic, and public safety (resulting from the potential of failure of the BMPs (e.g., levees) and the physical presence of large-scale facilities that might impede emergency response and traffic flow). Further, property values may be adversely affected.

Mitigation: None necessary.

IX. Land Use and Planning b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Answer: Less Than Significant Impact

Impact Discussion: Since the locations of potential BMPs that will be implemented to comply with the TMDLs are currently unknown and cannot be dictated by the Regional Board, the potential for this impact is too speculative to consider in detail in this document.

Mitigation: Local and regional planning agencies and resource agencies must be consulted when implementation of BMPs is considered. Potential conflicts with land use plans, policies and regulations must be identified in this process and resolved through selection of alternative BMP sites, designs or facilities. Where any such conflicts cannot be resolved in this manner, then BMP implementation would require prior changes to the applicable plans, policies or regulations.

IX. Land Use and Planning c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Answer: Less Than Significant Impact

Impact Discussion: See IV. Biological Resources a) above.

Mitigation: See IV. Biological Resources a) above. Consultation with resources agencies, including the California Department of Fish and Game the U.S. Fish and Wildlife Service must occur prior to large-scale BMP implementation to identify and resolve potential conflicts by selection of alternative BMPs, locations or designs.

## **X. MINERAL RESOURCES**

Will the project ...

X. Mineral Resources a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?  
X. Mineral Resources b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Answer (a and b): Less than Significant with Mitigation Incorporation

Impact Discussion: The implementation of non-structural BMPs would not result in physical changes that would result in the change of the availability of a known mineral resource or resource recovery site that is valuable or locally important.

Similarly, no situation is reasonably foreseeable in which the implementation of a structural BMP, if selected by a responsible agency in response to the TMDLs, would affect these resources. However, if in the course of site-specific project design, should such impacts were to be identified, appropriate measures such as site re-design or relocation may be necessary.

Mitigation: Impacts to mineral resources can be avoided or reduced by proper planning, site design and consideration of alternative locations. These mitigation measures can and should be required by local lead and responsible agencies through their CEQA and/or planning processes.

## **XI. NOISE**

Will the project ...

XI. Noise a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Answer: Potentially Significant

Impact Discussion: Non-structural BMPs that entail the operation of vehicles and equipment (street sweeping and pesticide collection programs) result in increased ambient noise levels of a temporary nature when the equipment/vehicles are present and in use. These BMPs are already implemented in the watershed and the effects of any changes in existing implementation of these non-structural BMPs, if implemented by the responsible parties in response to the proposed TMDLs, are expected to be insignificant.

The construction of BMPs such as detention basins and engineered treatment systems would necessitate increases in the transport and use of vehicles and equipment, which would raise ambient noise levels. While these impacts would be short-term in nature, they nevertheless may be significant during construction. Similarly, dredging operations and the attendant transport of personnel and equipment would increase ambient noise levels. Again, these impacts would occur during the dredging operation and cease once the project is completed. Large-scale dredging projects may require weeks or months to complete. While the noise impacts are not permanent, they may be significant during the period of operation.

Since the specific locations of potential BMPs that will be implemented to comply with the TMDLs are currently unknown and cannot be dictated by the Regional Board, the potential for increased noise levels cannot be assessed at this time in relation to specific general plans or noise ordinances. Construction zones located near residential areas are particularly likely to result in noise impacts since standards for residential areas are generally more stringent than commercial and/or industrial areas and noise levels may be considered severe.

Mitigation: The preparation and implementation of site-specific operational plans that identify a range of measures is recommended to limit the impacts of noise from specific construction and/or maintenance activities to adjacent homes and businesses. Noise impacts can be reduced but not completely avoided by project timing to minimize public exposure, the use of sound barriers such as walls or vegetation, where feasible, and proper operation and maintenance of vehicles and equipment fitted with mufflers.

XI. Noise b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Answer: Potentially Significant

Impact Discussion: See XI. Noise a) above. The transport and use of heavy equipment needed to implement large-scale structural BMPs, or to move disposal containers at hazardous waste collection sites, may result in localized and temporary ground borne vibration or noise. While these impacts would be limited spatially and temporally, they may nevertheless be significant during the operation of the equipment.

Mitigation: See XI. Noise a) above. Equipment should be properly operated and maintained to reduce noise. Movement and use of the equipment could be timed to minimize public exposure to unavoidable noise/ground borne vibration.

XI. Noise c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Answer: No Impact

Impact Discussion: Dredging and detention basin construction activities will likely result in the increase of noise levels. However, as indicated in the XI. Noise a) impacts discussion above, such impacts would be short-term and limited in duration.

Mitigation: None necessary.

XI. Noise d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Answer: Potentially Significant

Impact Discussion: See XI. Noise a) above.

Mitigation: See XI. Noise a) above.

XI. Noise e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Answer: Potentially Significant

Impact Discussion: See XI. Noise a) above.

Mitigation: See XI. Noise a) above.

XI. Noise f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Answer: Potentially Significant

Impact Discussion: See XI. Noise a) above.

Mitigation: See XI. Noise a) above.

## **XII. POPULATION AND HOUSING**

Will the project ...

- XII. Population and Housing a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- XII. Population and Housing b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- XII. Population and Housing c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Answer: No Impact

Impact Discussion: It is not foreseeable that the implementation of the TMDLs would induce growth or displace existing housing or require the construction of new homes or businesses. Displacement of existing housing due to large-scale BMP implementation, possibly requiring replacement construction elsewhere, is extremely unlikely, given social, economic and environmental concerns (see IX. Land Use and Planning a), above. New or iterative improvement of existing non-structural BMPs should not result in physical changes that would lead to these effects.

It is unlikely that local planning agencies would allow compliance with the TMDLs to conflict with housing or population needs, which may be viewed as more significant on social and economic grounds. Given the limited availability of developable land and its cost, it is likely that site selection for BMPs would focus on areas not well-suited to housing development and/or that the BMPs would be integrated with new developments to provide open space, parks, and buffers. Such facilities could be used to satisfy existing permit requirements (e.g., MS4 permit). Multiple small-scale BMPs may be selected in lieu of large-scale facilities.

Mitigation: None necessary.

### **XIII. PUBLIC SERVICES**

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

Answer: No impact.

Impact Discussion: The implementation of non-structural and structural BMPs necessary to implement the proposed TMDLs would not result in physical changes to the environment that would necessitate the construction of substantial new or altered governmental facilities, including facilities that would result in substantial adverse environmental impacts.

Mitigation: None necessary.

#### **XIV. RECREATION**

Would the project...

XIV. Recreation a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Answer: Less than significant impact.

Impact Discussion: To achieve compliance with the proposed TMDLs, responsible parties may choose to construct and operate structural BMPs in or adjacent to neighborhood or regional parks. In fact, BMPs may be purposefully designed to serve dual recreational and water quality control purposes. Construction, operation and periodic maintenance of the facilities may cause short-term disturbances that in turn result in increased recreational use of park facilities elsewhere. However, such an effect would be limited in duration and thus not likely to result in substantial deterioration of the alternative facilities.

Disturbance caused by dredging would likely result in the use of alternative locations for recreational purposes, for the duration of the dredging activity. Again, the effect would be limited in duration and thus not likely to result in substantial deterioration of alternative facilities.

Mitigation: None necessary.

XIV. Recreation b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Answer: No impact.

Impact Discussion: No reasonably foreseeable implementation of control measures in response to the proposed TMDLs would include or necessitate the construction/expansion of recreational facilities.

Mitigation: None necessary.

## **XV. TRANSPORTATION/TRAFFIC**

Would the project...

XV. Transportation/Traffic a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Answer: Potentially Significant Impact

Impact Discussion: Construction, operation and maintenance of large-scale structural BMPs and dredging activities would result in increased vehicular traffic, including the transport of personnel and equipment to and from the construction/dredging site and the removal and disposal of sediment/dredge spoils. This impact would be temporary during construction and of limited duration and frequency during operation/maintenance. However, this impact is potentially significant in light of existing road congestion.

Mitigation: This impact may be mitigated to some degree by changing the timing of vehicle movement to evening or early morning hours, when rush hour traffic has subsided. However, in light of potential additional costs associated with night-time construction and practical considerations (e.g., safety, low light levels and the need for artificial lighting), it is not likely that these activities could be sufficiently re-timed to eliminate the traffic impact.

XV. Transportation/Traffic b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Answer: Potentially Significant Impact

Impact Discussion: See XV. Transportation/Traffic a), above.

Mitigation: See XV. Transportation/Traffic a), above.

XV. Transportation/Traffic c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

Answer: No impact.

Impact Discussion: The implementation of structural BMPs in the watershed would not involve use of aircraft and thus would have no effect on air traffic patterns.

Mitigation: None necessary.

XV. Transportation/Traffic d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Answer: Less than significant with mitigation

Impact Discussion: Improperly designed or constructed large-scale structural BMPs could result in traffic safety hazards, such as intersections with limited sight distance, or sharp curves in adjacent roadways. Construction of the BMPs may require the transport and use of oversize vehicles/equipment. In light of extensive development in the watershed that requires the use/transport of such equipment, any incremental increase in such traffic occasioned by the proposed TMDLs is not likely to be substantial. Further, the use/transport of such of equipment would be limited in frequency and duration.

Mitigation: With proper design and construction, the implementation of structural BMPs should not result in substantial increased roadway hazards. Potential hazards associated with the movement of oversize trucks and equipment can be minimized by proper timing to avoid high traffic periods.

XV. Transportation/Traffic e) Result in inadequate emergency access?

Answer: No impact.

Impact Discussion: There is no reason to suppose that the implementation of reasonably foreseeable structural or non-structural BMPs would have any effect on emergency access.

Mitigation: None necessary.

XV. Transportation/Traffic f) Result in inadequate parking capacity?



Answer: Less than significant.

Impact Discussion: Depending on their size and location, the implementation of large-scale structural BMPs could reduce or eliminate available parking in the vicinity.

Mitigation: This impact could be avoided or mitigated with proper project siting and design, including provision of additional alternative parking.

XV. Transportation/Traffic g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Answer: No impact.

Impact Discussion: There is no reason to suppose that the implementation of reasonably foreseeable structural or non-structural BMPs would have any effect on alternative transportation policies, plans or programs.

Mitigation: None necessary.

## **XVI. UTILITIES AND SERVICE SYSTEMS**

Would the project...

XVI. Utilities and Service Systems a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Answer: Less than significant.

Impact Discussion: As previously discussed (VIII. Hydrology and Water Quality a)), consistent compliance with waste discharge requirements for large-scale dredging projects may be difficult to achieve. However, with proper implementation of equipment and operations, any violations should be infrequent and limited spatially and temporally and therefore not result in significant adverse impacts.

Structural and non-structural BMPs are already being implemented in the watershed, in part to comply with existing waste discharge requirements. Incremental additions to or enhancement of these BMPs may be necessary to comply with new or revised waste discharge requirements based on the TMDLs, if and when the TMDLs are approved.

Mitigation: Violations of waste discharge requirements can be avoided through proper siting, design, construction and operation of BMPs.

XVI. Utilities and Service Systems b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Answer: No impact.

Impact Discussion: Implementation of the reasonably foreseeable BMPs necessary to comply with the proposed TMDLs will not result in demands for new sources of potable supply or for additional wastewater treatment and therefore, will not require construction or expansion of water or wastewater treatment facilities.

Mitigation: None necessary.

XVI. Utilities and Service Systems c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Answer: Potentially significant impact.

Impact Discussion: Implementation of detention basins and/or engineered wetlands will or may become a part of the storm drainage facilities, purposefully designed to reduce pollutants (including sediment) in storm water and nuisance flows. As discussed above, the construction and operation of such facilities may have significant impacts on the environment, including air quality, transportation and traffic and noise levels. Although these impacts are expected to be short term in nature and limited spatially, they may be significant.

Mitigation: Mitigation measures identified in the previous discussions of air quality, transportation/traffic and noise effects may reduce impacts associated with BMP implementation, but it is unlikely that these impacts could be completely avoided.

XVI. Utilities and Service Systems d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Answer: No impact.

Impact Discussion: The reasonably foreseeable methods of compliance with the proposed TMDLs will not create a demand for new sources of water supply.

Mitigation: None necessary.

XVI. Utilities and Service Systems e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Answer: No impact.

Impact Discussion: The reasonably foreseeable methods of compliance with the proposed TMDLs will not create a demand for new wastewater treatment.

Mitigation: None necessary.

XVI. Utilities and Service Systems f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Answer: Potentially significant impact.

Impact Discussion: The locations, magnitude and specific nature of potential BMPs that will be implemented to comply with the TMDLs are currently unknown. It is possible that dredging activities and/or excavation needed to construct large-scale detention basins or engineered wetlands would generate large volumes of spoils that might require landfill disposal (if the soils contain contaminants or other constituents not acceptable for use as fill on-site or at nearby locations) and could exceed available landfill capacity. The lack of available disposal capacity may necessitate changes in BMP selection and implementation.

Mitigation: Pre-project planning should be used to anticipate land disposal needs and to assess the need for implementation of project alternatives. Where insufficient disposal capacity is available, alternative BMPs may need to be selected and implemented. Given the presently speculative nature of the type, magnitude and locations of specific BMPs, It is not known whether landfill capacity issues might preclude use of BMPs necessary to achieve compliance with the proposed TMDLs, though this is considered unlikely.

XVI. Utilities and Service Systems g) Comply with federal, state, and local statutes and regulations related to solid waste?

Answer: No impact.

Impact Discussion: There is no reason to suppose that the implementation of the reasonably foreseeable methods of compliance with the proposed TMDLs would necessitate or result in non-compliance with applicable solid waste regulations.

Mitigation: None necessary.

## **XVI. MANDATORY FINDINGS OF SIGNIFICANCE**

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Answer: Potentially significant impact.

Impact Discussion: As described in the preceding analysis, the implementation of reasonably foreseeable methods of compliance with the proposed TMDLs could result in potentially significant environmental impacts with respect to certain Air Quality, Biological Resources, Noise, Transportation/Traffic and Utilities and Services considerations. While the majority of these impacts would be expected to most pronounced during periods of construction/dredging and would be limited spatially and/or temporally, these effects may nevertheless be significant for periods of time in areas affected by BMP implementation. Dredging or other construction activities may result in direct mortality or other disturbance leading to mortality, permanent relocation and reduced reproductive success of listed or candidate species.

Mitigation: Mitigation measures may be employed, as described in the preceding analysis, to reduce or in some cases avoid these impacts. However, impacts may be unavoidable in certain locations and/or at certain times, even with the implementation of mitigation measures.

## **XVI. MANDATORY FINDINGS OF SIGNIFICANCE**

b) Does the project have impacts that are individually limited, but cumulatively considerable? ('Cumulatively considerable' means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Answer: Less than significant impact with mitigation incorporated.

Impact Discussion: As discussed above, the implementation of reasonably foreseeable methods of compliance with the proposed TMDLs may result in spatially and/or temporally limited but potentially significant environmental degradation. These effects are largely related to the construction and operation of large-scale BMPs (detention basins/engineered wetlands and/or dredging) and result from increased vehicular/equipment operation and disposal of any excavated/dredged material. Dredging operations have been and/or are presently being conducted both in the watershed and the Bay to address established TMDLs and to restore and protect biological and navigational beneficial uses. The incremental effects of any additional dredging necessary to comply with the proposed TMDLs are not cumulatively considerable, provided that suitable mitigation measures are employed during the dredging operations (see IV. Biological Resources a), above). Similarly, detention basins/wetlands are being constructed in the watershed and/or are planned in response to established permit/TMDL requirements, or on a voluntary basis. Mitigation measures can be used to avoid or reduce the impacts of these facilities (see IV. Biological Resources a), above). As described in Section 3.1, significant urban development of the watershed is underway, with many of the same attendant environmental consequences of the implementation of the reasonably foreseeable methods of TMDL compliance; increased vehicular and equipment movement, with impacts on traffic/transportation, air quality and noise; the need for disposal of excavated materials, with potential effects on landfill capacity. Therefore, the reasonably foreseeable BMPs that will be implemented to address the proposed TMDLs should not result in cumulatively considerable environmental effects.

Mitigation: Mitigation measures, as described above, designed to address the environmental effects evaluated in the preceding analysis.)

## **XVII. MANDATORY FINDINGS OF SIGNIFICANCE**

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Answer: Less than significant

Impact Discussion: As discussed above, the implementation of reasonably foreseeable methods of compliance with the proposed TMDLs may result in spatially and/or temporally limited but potentially significant environmental degradation that could affect human beings (e.g., effects on air quality, noise, transportation/traffic). Again, these impacts are expected to be spatially and/or

temporally limited and are not expected to exert substantial adverse effects on human beings.

Mitigation: None necessary (apart from mitigation measures, described above, designed to address the environmental effects evaluated in the preceding analysis.)

## **OTHER CONSIDERATIONS**

Implementation of the reasonably foreseeable methods of compliance will require financial commitments by responsible parties, including cities, Orange County, local landowners and state agencies (Caltrans). To the extent that financial and staff resources available to these parties are dedicated to achieving compliance with the proposed organochlorine TMDLs, the resources available to conduct other programs, including those required by waste discharge requirements and/or established TMDLs, are likely to be limited. Such financial restrictions may have a variety of social and environmental effects, including the ability of responsible parties to comply with waste discharge requirements/TMDLs, or potentially, to implement other programs needed to protect public health and the environment. The nature of these impacts is recognized but is too speculative to analyze in detail.

Recognizing this potential consequence, the proposed TMDLs employ a phased approach, with an extended compliance schedule. The intent is to allow uncertainties associated with the TMDLs to be addressed so as to assure that limited funds are directed in a fair, effective and responsible manner to address pressing water quality problems in a prioritized fashion. The proposed TMDL implementation plan allows responsible parties in the watershed to develop an implement an integrated program to address multiple TMDL and permit requirements that are already in place or are anticipated. Such an integrated approach allows for prioritization of the expenditure of public resources, avoidance of duplicative or overlapping regulation and response, and can ultimately provide for the most effective, as well as efficient, way to identify and resolve water quality standards issues in the watershed.

### **6.1 Reasonably Foreseeable Alternative Means of Compliance to Avoid Impacts**

CEQA requires an analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, which would avoid or eliminate the identified impacts.<sup>20</sup> The reasonably foreseeable methods of compliance with the proposed TMDLs are identified in Section 4. As previously stated, many of these BMPs are already being implemented in Newport Bay and its watershed in

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<sup>20</sup> 14 CCR section 15187 (c) (3) Wanda – note that I changed the font here

response to existing permit requirements, established TMDLs for the watershed, and/or on a voluntary basis.

A wide variety of permutations and combinations of these BMPs could be selected for implementation, taking into account physical, environmental and fiscal constraints, opportunities to integrate BMP implementation to meet these and other TMDLs and permit requirements, and opportunities to coordinate BMP implementation with habitat and wildlife restoration and protection goals. Because there are innumerable ways to combine the BMPs, all of the possible alternative means of compliance cannot be discussed here. However, because most of the significant adverse environmental effects would result from the implementation of large-scale BMPs, such as detention basins and dredging activities, alternatives that minimize the use, scope and environmental impacts of these facilities/activities should be identified and implemented, provided that compliance with the TMDLs can be achieved. The use of non-structural BMPs, with more limited adverse environmental effects, should be maximized.

Section 13360 of the Water Code specifies that the Regional Board cannot dictate the compliance measures responsible agencies may choose to adopt, or which mitigation measures they would employ, in response to the implementation of the OCs TMDLs. However, the Regional Board recommends that appropriate compliance and mitigation measures, as discussed herein, which are readily available and generally considered to be consistent with industry standards, be applied in order to reduce, and if possible avoid, potential environmental impacts, such that there is no significant impact. Since the decision to perform these measures is strictly within the responsibility and jurisdiction of the individual implementing agencies, such measures can and should be adopted by these agencies. (Title 14, California Code of Regulations, Section 15091(a)(2).)

As such, dischargers will choose to use the structural and non-structural BMPs described in Section 4 or other structural and non-structural BMPs, to control and prevent pollution, and meet the load reductions required by the TMDLs. The alternative means to comply with the TMDLs consist of the innumerable ways to combine the structural and non-structural BMPs typically used by the responsible agencies. However, because the construction and installation of large scale structural BMPs are associated with adverse environmental effects, compliance alternatives should minimize structural BMPs in general and maximize non-structural BMPs. If structural BMPs are selected, they should be sized and designed to minimize, avoid or eliminate environmental impacts.

## 7 Reasonable Alternatives to the Proposed Activity

Pursuant to the State Water Board's regulations for implementing the CEQA<sup>21</sup>, this environmental review must include an analysis of reasonable alternatives to the proposed adoption of the Basin Plan amendment to include organochlorine compound TMDLs for San Diego Creek and Newport Bay. The intent is to consider whether there are reasonable alternatives that would fulfill the underlying purpose of the proposed amendment to achieve and protect water quality standards, but minimize or eliminate the potential adverse environmental effects discussed above. The alternatives evaluated include:

- (1) No Project
- (2) Adopt a Basin Plan amendment to incorporate an implementation plan for the organochlorine chlorine compounds TMDLs promulgated by USEPA
- (3) Alternative approaches to TMDL development, including:
  - (i) Alternative guidelines for evaluating impairment that may affect impairment findings and the need for TMDLs for one or more organochlorine compounds
  - (ii) Alternative numeric targets as the basis for calculating TMDLs
- (4) Alternative approaches to TMDL implementation, including compliance schedules.

Each of these alternatives is discussed below.

### 7.1 No Project Alternative

The "No Project" alternative would mean that the Regional Board would not adopt organochlorine compounds TMDLs with an implementation plan, including a monitoring program.

The existing Environmental Setting (see Section 3, above; see also November 17, 2006 Organochlorine Compounds TMDLs Technical Report, sections 1.1 and 2.0) establishes the baseline for the analysis of the no project alternative. Briefly, beginning in the 1990's, San Diego Creek and Newport Bay were included on State-adopted and USEPA-approved Clean Water Act Section 303(d) lists of impaired waters due, in part, to toxic substances. Clean Water Act Section 303(d) requires that TMDLs be established to address this impairment<sup>22</sup>. Based on the agency's separate impairment

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<sup>21</sup> CCR title 23, sec. 3777(a)

<sup>22</sup> Per Clean Water Act Section 303(d) and implementing federal regulations, TMDLs must be established to address water quality standards impairment, unless states document, to the satisfaction of USEPA, that there are other pollution control requirements (e.g., BMPs) sufficiently stringent to achieve applicable



assessment, USEPA promulgated TMDLs for specific Newport Bay/San Diego Creek waterbody/organochlorine compound combinations in 2002. The State Board adopted and USEPA approved 2006 303(d) list confirms impairment of specific waters in the Newport Bay watershed, and the Bay itself, due to identified organochlorine compounds. The waterbody/organochlorine pollutant combinations identified in the 2006 303(d) list differ from the list of USEPA promulgated TMDLs. Specifically, USEPA-established TMDLs included TMDLs for dieldrin for Lower Newport Bay and San Diego Creek, and for chlordane and PCBs in San Diego Creek. In contrast, impairment assessments conducted by Regional Board staff (see November 17, 2006 TMDLs Technical Report, Section 2.3), and by State Board staff to support the 2006 303(d) listing process, found no impairment due to dieldrin in either San Diego Creek or Lower Newport Bay, and no impairment due to chlordane or PCBs in San Diego Creek. Based on these findings, the TMDLs proposed by Regional Board staff do not include dieldrin for either the Lower Bay or San Diego Creek. Further, Board staff recommends informational TMDLs only for chlordane and PCBs in San Diego Creek. These informational TMDLs would not be required to be implemented (see November 17, 2006 TMDLs Technical Report, Section 2.4.4) and Attachment to Resolution No. R8-2007-0024, 4.b.).

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water quality standards within a reasonable period of time. EPA has interpreted that these requirements must already be implemented, not just proposals to undertake specific activities. USEPA guidance describes the demonstrations that states must make to justify the conclusion that other control requirements obviate the need for TMDLs ("Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act", pages 53-56 (discussion re Category 4b segments)). EPA acknowledges that the level of rigor necessary to support the state's rationale will vary depending on the complexity of the impairment and the implementation strategies in place to address it. Accordingly, USEPA evaluates each such proposal on a case-by-case basis.

In the case of the organochlorine compounds for San Diego Creek/Newport Bay, USEPA Region IX staff have indicated that approval of a control alternative-to-TMDLs approach would require the demonstration that there is a definitive connection between source controls of sediment (sediment transport is the principal method of transport of the organochlorine compounds within the watershed (see November 17, 2006 TMDLs Technical Report, Section 3.4) and corresponding reduction of organochlorine compounds in the watershed and receiving waters (Personal communication from Peter Kozelka, USEPA Region IX, to Regional Board staff, January 9, 2007). The Regional Board would have to demonstrate that sufficient BMPs have been implemented and that monitoring confirms that implementation of these BMPs results in a definite decline in organochlorine compound loadings. USEPA Region IX also assumes that compliance within a "reasonable period of time" would be defined as within the next 303(d) listing cycle or two years, whichever comes first. Given these constraints, it is not feasible to demonstrate that pollution control requirements obviate the need for TMDLs in this case, since the monitoring data to document reductions in organochlorine compound loadings as the result of the sediment control BMP implementation are not available. Further, while BMP implementation in response to existing federal and state established TMDLs and waste discharge requirements (see text), together with natural attenuation of the organochlorine compounds, should result in reductions of loadings of these compounds over time, it is not feasible to identify the schedule by which water quality standards will be achieved. The conclusion that an existing alternative pollution control strategy does not suffice to obviate the need for TMDLs is confirmed by USEPA's action to promulgate TMDLs for the organochlorine compounds for San Diego Creek and Newport Bay in 2002 (see text).

If the Regional Board does not adopt the proposed Basin Plan amendment to incorporate organochlorine compound TMDLs (i.e., the No Project Alternative), then the Board must implement the USEPA promulgated TMDLs<sup>23</sup>. The USEPA TMDLs do not include an implementation plan or compliance schedules, since implementation strategies are within the purview of the state. The TMDL Basin Plan amendment proposed by Regional Board staff includes an implementation plan and compliance schedules.

Also as described in “Environmental Setting” (see Section 3, above; see also November 17, 2006 TMDLs Technical Report, Sections 1.1 and 2.0), Newport Bay and San Diego Creek are also included on the Clean Water Act Section 303(d) list of impaired waters as the result of nutrients and sediment. TMDLs have been established to address these impairments. These TMDLs require implementation of measures to reduce nutrient and sediment loading to the Bay and its watershed and to conduct monitoring to evaluate the efficacy of control measures and compliance with the TMDLs, including load and wasteload allocations. These TMDLs are being implemented.

The Regional Board and State Board have adopted requirements (NPDES permits and Waste Discharge Requirements) that regulate certain types of waste discharges in the San Diego Creek/Newport Bay watershed (see November 17, 2006 TMDLs Technical Report, Section 8, Table 8-2 and Section 8.3.4). These waste discharge requirements have been or must be revised to include requirements necessary to implement all established TMDLs in the Newport Bay watershed, including limitations based on applicable wasteload and load allocations and monitoring requirements.

In summary, the relevant context in which to consider the environmental effects of the No Project Alternative relative to those of the proposed Basin Plan amendment includes: TMDLs for organochlorine compounds established by USEPA in 2002 that must be implemented by the Regional Board; nutrient and sediment TMDLs that have been established and are now being implemented; and, existing waste discharge requirements that include or must be revised to include requirements necessary to implement established TMDLs, including the organochlorine compounds TMDLs promulgated by USEPA. The established TMDLs and relevant waste discharge requirements (e.g., the General Permit for Discharge of Storm Water Runoff Associated with Construction Activity (Order No. 99-08-DWQ) and the Orange County areawide urban stormwater permit (Order No. R8-2002-0010, NPDES No. CAS618030)), require or will require implementation of sediment control measures and an iterative process, based on the results of monitoring, to improve those control measures where necessary

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<sup>23</sup> It may be noted again (see also Section 3, above) that if the Regional Board adopts the proposed organochlorine compound TMDLs, then these TMDLs would supersede those established by USEPA upon USEPA approval. However, any USEPA-established TMDL will remain in effect unless it is included in the proposed TMDLs approved by the state or the appropriate delisting is approved. The proposed TMDLs do not include dieldrin for San Diego Creek or Lower Newport Bay, or chlordane and PCBs for San Diego Creek (see text). Therefore, USEPA-established TMDLs for dieldrin in Lower Newport Bay and San Diego Creek, and for chlordane and PCBs in San Diego Creek would remain in effect upon approval of the proposed organochlorine compound TMDLs and would need to be implemented in waste discharge requirements unless and until appropriate delistings of these pollutant/waterbody combinations are approved.

to achieve needed sediment and associated pollutant (e.g., organochlorine compounds and phosphorus) reductions.

The principal foci of the implementation plan proposed by Regional Board staff to achieve compliance with the recommended organochlorine compounds TMDLs are: (1) implementation/enhancement of control measures to reduce loadings of sediment and, thereby, organochlorine compounds to surface waters in the Newport Bay watershed; and (2) monitoring and other investigations to evaluate the efficacy of the control measures implemented, determine compliance with the TMDLs, and address uncertainties to provide a technical basis for future refinement of the TMDLs. The Environmental Checklist (Section 5) identifies potential environmental impacts that may result from the reasonably foreseeable methods of compliance, i.e., implementation/enhancement of sediment control measures. These sediment control measures (and monitoring/investigation requirements specified in the proposed implementation plan) are, or are expected to be, essentially the same as those specified or to be specified in waste discharge requirements to implement already established TMDLs, including the organochlorine compounds TMDLs promulgated by the USEPA. Therefore, the No Project Alternative would not have any less potential environmental effect than the adoption and implementation of the proposed organochlorine compound TMDLs.

The No Project Alternative might have a greater potential adverse environmental effect than the proposed amendment to incorporate organochlorine compounds TMDLs for the following reason. In the absence of the amendment, the Regional Board must implement the USEPA-established TMDLs. No compliance schedule is specified in the USEPA TMDLs and, accordingly, the Regional Board has no discretion to include compliance schedules in NPDES permits issued to responsible parties to implement the TMDLs. (Where immediate compliance with the permit requirements necessary to implement the TMDLs (e.g., effluent limitations based on wasteload allocations) is infeasible, a compliance schedule could be specified only in an enforcement order (e.g., cease and desist order)). The lack of compliance schedule authorization would likely make it more difficult to justify or provide compliance schedule relief and thus necessitate actions by responsible parties on an immediate basis. In contrast, the proposed amendment includes compliance schedules that would be used as the basis for specifying in permits schedules for compliance with requirements needed to implement the TMDLs. The compliance schedules are part of the proposed implementation plan, which explicitly recognizes that time is necessary both to achieve compliance and to address uncertainties that may affect the TMDLs. The proposed implementation plan includes monitoring, special studies and review of the scientific aspects of the TMDLs by an Independent Advisory Panel (see Attachment to Resolution No. R8-2007-0024, Section 4.b.3., Implementation of Organochlorine Compounds TMDLs). These investigations and review may lead to recommendations for revisions to the TMDLs, including delisting of certain waterbody/pollutant combinations. The proposed implementation plan explicitly calls for review of the TMDLs to consider such refinements. To the extent that any such refinements would decrease the scope of the TMDLs and the control measures required, the potential environmental effects would

also likely be reduced. Furthermore, the proposed implementation plan provides watershed stakeholders an opportunity to participate in an integrated Work Plan approach (see Attachment to Resolution No. R8-2007-0024, Section 4.b.3., Implementation of Organochlorine Compounds TMDLs, Task 7) that is intended to address the multiple water quality impairments in the San Diego Creek/Newport Bay watershed in a comprehensive manner. The Work Plan approach is expected to provide a more effective and efficient method of addressing water quality problems affecting these waters. To the extent that control measures can be implemented to address multiple causes of impairment, the potential environmental effects of separate implementation of control measures would likely be reduced.

## **7.2 Adopt an Implementation Plan for USEPA TMDLs**

In lieu of adopting the proposed organochlorine compounds TMDLs and implementation plan, the Regional Board could adopt a Basin Plan amendment to incorporate the TMDLs promulgated by the USEPA in 2002, with an appropriate implementation plan. As discussed below, this alternative is not legally available and was rejected on that basis. Further, even if this alternative were legal, the potential environmental effect of this alternative would not be appreciably different than that of the proposed TMDLs and implementation plan recommended by Regional Board staff.

Regional Board staff's recommended organochlorine compounds TMDLs differ from those established by USEPA in several ways. First, as described in the No Project Alternative discussion, Board staff does not recommend TMDLs for dieldrin for Lower Newport Bay or San Diego Creek and recommends only informational TMDLs (that do not need to be implemented) for chlordane and PCBs in San Diego Creek. This difference resulted from a revised impairment assessment conducted by Board staff that relied on new data and the evaluation criteria specified in the State Board's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (September 2004) ("Listing Policy"). Second, in calculating loading capacities, Board staff relied on the sediment loading allowed by the established sediment TMDL for the San Diego Creek/Newport Bay watershed. This was done to assure consistency between the sediment and proposed organochlorine compounds TMDLs. In contrast, USEPA calculated loading capacities using the estimated current sediment loading to San Diego Creek and Newport Bay, resulting in higher loading capacities than would be obtained by using the sediment TMDL allowable loads. (See November 17, 2006 Technical TMDLs Report, Sections 2.3 and 5.2). In turn, USEPA's loading capacities result in higher wasteload and load allocations. USEPA's approach was not consistent with the established sediment TMDL. Third, Board staff's TMDLs include technical corrections (short-ton rather than metric ton conversions; a revised partition coefficient for DDT to reflect a weighted average for DDT and its breakdown products (DDE and DDD), rather than an arithmetic average).

Consideration of a Basin Plan amendment to incorporate USEPA's TMDLs, with an implementation plan is not a legally feasible alternative since those TMDLs do not

comport with the regulations established in the sediment TMDL for the San Diego Creek/Newport Bay watershed. No further analysis of this alternative is required given that it is not legally available to the Regional Board.

However, it is worth noting that even if this option were legally available, the implementation plan developed to implement the USEPA TMDLs would be essentially the same as that proposed for Board staff's recommended TMDLs. While USEPA's loading capacities and allocations are higher than those recommended by Board staff, they include TMDLs for more pollutant-waterbody combinations and they are still very low. The implementation measures needed to achieve them would, therefore, not be appreciably different and the potential environmental effect of this alternative would be the same as that of the recommended alternative.

### **7.3 Alternative Approaches to TMDL Development**

#### **7.3.1 Alternative Guidelines for Evaluating Impairment**

The impairment assessment conducted by Board staff (see November 17, 2006 Technical TMDLs Report, Section 2.0) relied on evaluation of data in accordance with the Listing Policy. The Listing Policy specifies that narrative water quality objectives, such as the narrative objectives for toxic substances addressed by the proposed organochlorine TMDLs, shall be evaluated using evaluation guidelines that represent standards attainment or beneficial use protection. The Listing Policy identifies the considerations that shall be used in the selection of evaluation guidelines (Listing Policy, Section 6.1.3 "Evaluation Guideline Selection Process"). Guidelines acceptable for use in evaluating sediment quality data and fish and shellfish tissue data (from both human health and aquatic life protection perspectives) are identified. Regional Board staff relied on these guidelines in conducting the organochlorine compounds impairment assessment. Based on this assessment, Board staff developed the proposed TMDLs for those organochlorine compounds shown to be causes of impairment.

The Listing Policy allows use of alternative evaluation guidelines provided that specific criteria are met. These criteria provide, in part, that alternative guidelines must be scientifically-based and peer reviewed (Listing Policy, Section 6.1.3 "Evaluation Guideline Selection Process").

Use of evaluation guidelines other than those employed by Regional Board staff could result in different findings of impairment for one or more of the organochlorine compounds now identified on the 303(d) list and for which TMDLs are proposed by staff. If such an assessment were to indicate no impairment as the result of one or more of these compounds, then the appropriate next step would be to consider delisting. If delisting of one or more of these compounds were to be approved, then TMDLs for those compounds would not be necessary, and the potential environmental effects of reasonably foreseeable methods of compliance (sediment control measures) with TMDLs otherwise required for these substances would be eliminated.

In short, an approved delisting is necessary to obviate the need for some or all of the TMDLs<sup>24</sup>; use of alternative evaluation guidelines in the impairment assessment alone would not suffice to reduce or eliminate the potential environmental effects of the proposed TMDLs.

Use of alternative evaluation guidelines was recommended by certain stakeholders during the development of the proposed organochlorine compounds TMDLs. These stakeholders questioned Regional Board staff's use of screening values identified by the Office of Environmental Health Hazard Assessment (OEHHA) and the National Academy of Sciences (NAS) guidelines, asserting that both the OEHHA and NAS guidelines are dated and that the NAS values contain errors that preclude their use. These stakeholders suggested an alternative marine DDT fish tissue threshold for purposes of evaluating whether narrative objectives are being met; that is, if bioaccumulation of DDT in fish or other aquatic organisms is causing or contributing to adverse impacts to aquatic life, wildlife or human health. Because the stakeholders' suggested threshold tissue value has not been peer-reviewed and published, this value does not meet the requirements specified in section 6.1.3 of the State Listing Policy for selection of evaluation guidelines to be used in assessing water quality impairment. Therefore, the suggested value was not considered when impairment thresholds were selected.

### **7.3.2 Alternative Numeric TMDL targets**

Numeric targets are the basis for calculation of TMDLs. The selection of numeric targets can significantly affect the TMDLs and the reductions in existing loadings of pollutants necessary to achieve the TMDLs. The reasonably foreseeable methods of compliance, including the number, type, location and size of source control measures needed to achieve the reductions, vary accordingly. In turn, the type and magnitude of potential environmental impacts depends on the variation in compliance methods. As a general rule, less stringent numeric targets will result in less stringent TMDLs and may result in less extensive implementation of control measures to achieve compliance. Therefore, less stringent numeric targets may be associated with reduced potential environmental effects. Whether the differential environmental effect is significant depends on the magnitude of the differences between the selected targets, and the calculated TMDLs.<sup>25</sup>

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<sup>24</sup> The presence of the USEPA organochlorine compounds TMDLs (see discussion of the No Project Alternative) must be considered again: even if a revised impairment assessment based on alternative evaluation guidelines leads to an approved delisting for one or more organochlorine compounds, any USEPA TMDL not addressed by the delisting would have to be implemented. The differential environmental effect of the alternative impairment assessment/delisting is too speculative to consider.

<sup>25</sup> As noted in the discussion of Alternative 2, above, while there are numerical differences in USEPA's and Regional Board staff's proposed TMDLs, both are low numbers and implementation would be expected to be essentially the same.

Board staff considered a range of alternatives for numeric sediment and fish tissue targets (see November 17, 2006 TMDLs technical Report, Section 3). The proposed numeric targets are, for the most part, those that were used by USEPA in establishing organochlorine compounds TMDLs in 2002. Tissue targets that are protective of aquatic life and wildlife are guidelines recommended by the State Board in the Listing Policy for assessing water quality impairment. Sediment targets are conservative, low-threshold Sediment Quality Guidelines (SQGs) that, if achieved, will ensure that the organochlorine compounds do not cause or contribute to direct toxicity to benthic organisms. The assumption is made that by protecting benthic organisms from direct effects, higher trophic level aquatic species, wildlife and humans will also be protected from bioaccumulation effects. The targets selected by Regional Board staff are conservative and will assure that water quality standards are achieved. This is consistent with the legal requirement that TMDLs achieve standards. In addition, the recommended TMDLs include a margin of safety to ensure protection of beneficial uses. The proposed amendment to incorporate organochlorine compounds TMDLs explicitly recognizes existing uncertainty pertaining to the targets. The proposed implementation plan includes monitoring and special investigations designed to address that uncertainty (see Attachment to Resolution No. R8-2007-0024, Section 4.b.3). It also provides for review of the targets and other scientific aspects of the TMDLs by an Independent Advisory Panel. The TMDLs will be reviewed and the numeric targets and other aspects of the TMDLs may be revised based on this additional investigation and evaluation (Attachment to Resolution No. R8-2007-0024, Section 4.b.3). To accommodate this additional investigation, review and possible refinement, the proposed TMDL implementation plan specifies a compliance schedule.

Alternative targets were recommended by certain stakeholders during the development and consideration of the proposed TMDLs. Use of the recommended alternative targets would have led to less stringent TMDLs and, in some cases, to TMDLs at or exceeding existing loadings of organochlorine compounds, indicating that TMDLs are in fact not necessary for these compounds. Significantly less stringent TMDLs, or elimination of TMDLs (if justified through a delisting process (see discussion of alternative guidelines for evaluating impairment above)), would be expected to result in reduced environmental effects. However, Board staff rejected the recommended alternative targets on one or both of two grounds: first, the recommended alternative numeric targets were based on observable effects levels, which, in Board staff's judgment, are not sufficient to assure protection of beneficial uses and thus to achieve water quality standards; second, the recommended alternative targets have not been subjected to scientific peer-review. Consistent with the requirements of the Listing Policy, selected numeric targets should be peer-reviewed and published. In short, the recommended alternative targets are not consistent with either statutory or regulatory requirements that TMDLs achieve standards or with relevant State Board Policy requirements.

The USEPA has indicated support for the proposed numeric targets (January 11, 2007 letter from Alexis Strauss, USEPA to Carole Beswick, Chairperson of the Regional Board), which have been widely used in California to address impacts from bioaccumulative toxic pollutants. USEPA supports adoption of the proposed

amendment to incorporate the organochlorine compounds TMDLs. It is highly unlikely that USEPA would approve TMDLs that rely on the alternative targets recommended by the stakeholders, for the reasons discussed in the preceding paragraph. As discussed previously (see discussion of No Project Alternative, and footnote 3), absent Regional Board-adopted and USEPA-approved TMDLs, the Regional Board would be required to implement the TMDLs promulgated by USEPA. Thus, the relative environmental effect of proposed TMDLs based on the alternative numeric targets would be essentially the same as the No Project Alternative (see discussion above).

#### **7.4 Alternative approaches to TMDL implementation, including compliance schedules**

Regional Board staff recommends a phased approach to implementation of the proposed TMDLs, including a schedule for compliance with the TMDLs and wasteload and load allocations and a commitment to review the TMDLs and revise them as necessary. The proposed implementation plan identifies specific tasks that must be pursued by the Regional Board and responsible parties to achieve compliance, with interim schedules. The proposed plan also provides for an integrated Work Plan approach to implementation of these tasks and those necessary to implement other TMDLs so as to address water quality problems in the watershed in a comprehensive and potentially more effective and efficient manner (see Attachment to Resolution No. R8-2007-0024, Section 4.b.3; also see discussion of No Project Alternative, above).

A variety of permutations and combinations of tasks and schedules necessary to implement the TMDLs could be considered. Board staff's plan is intended to assure that actions necessary to achieve the TMDLs, and thereby water quality standards, are achieved within a reasonable period of time, as required by the Clean Water Act and implementing federal regulations. Certain stakeholders recommended that adoption of the TMDLs be withheld pending resolution of technical uncertainties, especially with respect to the numeric targets selected. The environmental effect of this alternative would be the same as that of the No Project Alternative, since in the absence of Regional Board adoption of TMDLs, and their approval by the state and USEPA, the Board must implement the TMDLs promulgated by the USEPA.

A longer time schedule than that proposed for compliance with the TMDLs might reduce the potential environmental effect of implementation of the TMDLs, if, during the extended time period, substantive revisions to the TMDLs and/or implementation plan were made such that the reasonably feasible methods of compliance (control measures) were reduced or eliminated. This situation is too speculative to consider in detail. This alternative was considered but rejected on the basis that (1) the schedule proposed by Board staff appears to provide a reasonable period to implement the tasks necessary to achieve compliance or to consider revisions where necessary before final compliance must be achieved; (2) the TMDLs will be implemented in a phased, adaptive manner with a specific commitment to review and revise as necessary, including modification of the compliance schedules if demonstrated to be appropriate and



necessary; and, (3) finally, and most importantly from the perspective of this environmental review, a longer schedule would not likely be approved by USEPA or other stakeholders. The expected result would be that the Regional Board would be required to implement USEPA's TMDLs, which do not specify a compliance schedule. Immediate compliance with these TMDLs would be required. The relative environmental effect of implementation of USEPA's TMDLs is discussed in the No Project Alternative section above.

A shorter time schedule or even a requirement for immediate compliance was also considered but rejected by Board staff, recognizing that compliance actions would require some time to implement, and that a reasonable period of time is necessary to address inherent uncertainties in the TMDLs. The potential environmental effects of a shorter or immediate compliance schedule would likely be more severe, given that there would not be an allowance of time to consider appropriate control actions and to integrate them with control actions necessary to achieve other TMDLs and waste discharge requirements. As discussed previously (see No Project Alternative discussion above), the proposed implementation plan provides an opportunity for integration of control measures to address multiple sources of impairment. This should reduce the overall environmental impact of multiple control measures implemented individually, and should provide more effective, timely and resource-efficient control of water quality standards impairment in the watershed.

In sum, the net effect of the proposed implementation plan and schedules is to provide a reasonable time frame for responsible parties to implement the tasks identified by Board staff, to identify the need for modification of the TMDLs and/or implementation plan, and to address water quality standards problems affecting Newport Bay and its watershed in a coordinated, comprehensive manner. The flexibility provided by the proposed implementation plan allows the responsible parties to identify and implement actions that minimize environmental impacts and/or provide requisite mitigation on a case-specific basis. The increased emphasis on the integrated Work Plan approach reflected in the revised proposed implementation plan responded to recommendations and requests from the stakeholders to provide this more flexible, integrated opportunity to address water quality standards challenges in the Newport watershed.

## CEQA DETERMINATION

### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agricultural Resources	<input checked="" type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology/Soils
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Hydrology / Water Quality	<input type="checkbox"/> Land Use / Planning
<input type="checkbox"/> Mineral Resources	<input checked="" type="checkbox"/> Noise	<input type="checkbox"/> Population / Housing
<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation	<input checked="" type="checkbox"/> Transportation / Traffic
<input checked="" type="checkbox"/> Utilities / Service Systems <input checked="" type="checkbox"/> Mandatory Findings of Significance		

## II. DETERMINATION

On the basis of this initial evaluation:

- \_\_\_ I find that the proposed project COULD NOT have a significant effect on the environment.
- \_\_\_ I find that the proposed project MAY have a significant effect on the environment. However, there are feasible alternatives and/or mitigation measures available that will substantially lessen any adverse impact. These alternatives are discussed in the attached written report.
- \_\_X\_\_ I find that the proposed project MAY have a significant effect on the environment. There are no feasible alternatives and/or feasible mitigation measures available that would substantially lessen any significant adverse impact. See Sections 5 and 6 for a discussion of this determination.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Wanda Cross  
Chief, Coastal Waters Planning

